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Contents

Abbreviations and symbols

e Estimated
p Provisional
pe Partly estimated
r Revised
… Data available at a later date
. Data unknown, not to be published or not meaningful
0 Less than 0.5 but more than nil
– Nil

Discrepancies in the totals are due to rounding.

Commentaries

Economic conditions

Underlying trends

German economic output likely to be down somewhat in Q4 2021

German real gross domestic product (GDP) is likely to have dropped somewhat in the final quarter of 2021. This is primarily due to the resurgence of the pandemic. The resultant changes in behaviour and containment measures put a significant strain on economic activity in parts of the services sector, particularly in December. According to surveys by the ifo Institute, enterprises' assessment of the current situation deteriorated considerably in the retail sector and the accommodation and food services sector. On an average of October and November, however, retail sales were up slightly on the third quarter after price adjustment and the drop in sales in accommodation and food services was relatively moderate only. By contrast, industry and construction probably generated positive stimuli in the fourth quarter. Surveys by the ifo Institute show that bottlenecks in the supply of intermediate goods continued to delay production considerably. The share of enterprises in the manufacturing sector reporting production delays due to supply bottlenecks even reached a new peak in December.[1] According to data available up to November, industrial output nevertheless rose somewhat. In particular, the automotive sector – an important contributor – recorded substantial growth from the previous sharply depressed level. The construction sector also saw distinctly more output than in the third quarter.

Preliminary results show GDP rose by 2.7% in 2021

According to provisional calculations by the Federal Statistical Office, real GDP rose by 2.7% on the year in 2021 as a whole (and also by 2.7% after calendar adjustment). This was far from enough to offset the steep drop in economic output of 4½% in 2020. Pandemic-related setbacks and supply-side bottlenecks dampened the recovery last year. On the output side, gross value added in the manufacturing sector increased substantially, but still fell well short of the pre-crisis 2019 level. The services sector also stepped up its gross value added significantly. However, in sectors especially affected by the pandemic, such as accommodation and food services and the arts, entertainment and recreation sector, it remained far below the pre-crisis level. Real gross value added fell slightly in the construction sector, which had remained largely unaffected by the pandemic in 2020. Anticipatory effects on account of the lower VAT rates in the second half of 2020 also played a role here. On the expenditure side, growth was boosted mainly by government consumption, investment in machinery and equipment, and exports. By contrast, private consumption continued to suffer from the effects of the pandemic and merely stagnated on an annual average.

Industry

Marginal rise in industrial output in November

Industrial output saw a marginal increase in November 2021 after seasonal adjustment,[2] exceeding the previous month's level by ¼%. On an average of October and November, it was up slightly on the third quarter (+¾%). However, production of intermediate goods and of consumer goods fell slightly (-1¼% and -½%). Production of capital goods saw a steep rise, on the other hand (+3¼%). This was mainly thanks to considerable growth in the automotive sector and in the manufacture of other transport equipment.[3] By contrast, there was a marked drop in the manufacture of machinery and equipment and of computer, elec-

1 See ifo Institute (2021). In the main construction sector, the share was down but remained high in a long-term comparison.
2 Seasonal adjustment here and in the remainder of this text also includes adjustment for calendar variations, provided they can be verified and quantified.
3 According to data already available for December from the German Association of the Automotive Industry (VDA) on the number of units produced, the robust growth continued.

Economic conditions in Germany*

Seasonally and calendar-adjusted

Period	Orders received (volume); 2015 = 100			
	Industry			
		of which:		Main construction
	Total	Domestic	Foreign	
2021 Q1	109.1	102.4	114.0	124.9
Q2	112.7	108.6	115.8	120.1
Q3	114.0	105.0	120.8	128.0
Sep.	111.8	98.0	122.3	136.0
Oct.	105.3	101.3	108.4	127.6
Nov.	109.2	98.8	117.1	…

Period	Output; 2015 = 100			
	Industry			
		of which:		Construction
	Total	Intermediate goods	Capital goods	
2021 Q1	96.4	102.9	90.6	113.7
Q2	95.3	104.0	87.0	116.7
Q3	93.1	100.9	83.5	114.6
Sep.	90.9	99.2	80.5	115.3
Oct.	93.7	99.3	86.4	116.1
Nov.	93.9	100.1	85.9	115.2

Period	Foreign trade; € billion			Memo item: Current account balance in € billion
	Exports	Imports	Balance	
2021 Q1	331.51	277.80	53.71	69.52
Q2	337.63	294.80	42.83	65.75
Q3	339.55	295.77	43.78	61.75
Sep.	112.37	99.47	12.90	18.17
Oct.	117.04	104.63	12.41	18.72
Nov.	119.01	108.10	10.91	17.21

Period	Labour market			
	Employment	Vacancies[1]	Unemployment	Unemployment rate
	Number in thousands			%
2021 Q2	44,807	662	2,716	5.9
Q3	44,992	748	2,542	5.5
Q4	…	798	2,432	5.3
Oct.	45,070	781	2,463	5.4
Nov.	45,113	796	2,428	5.3
Dec.	…	817	2,405	5.2

Period	Prices; 2015 = 100			
	Import prices	Producer prices of industrial products	Construction prices[2]	Harmonised consumer prices
2021 Q2	106.5	110.2	125.1	108.6
Q3	112.5	115.9	129.4	109.7
Q4	…	125.7	132.2	111.1
Oct.	118.5	122.9	.	110.6
Nov.	121.9	124.1	.	111.2
Dec.	…	130.2	.	111.4

* For explanatory notes, see Statistical Section, XI, and Statistical Series – Seasonally adjusted business statistics. **1** Excluding government-assisted forms of employment and seasonal jobs. **2** Not seasonally and calendar-adjusted.

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tronic and optical products. Overall, industrial output was still considerably lower than the pre-crisis level from the fourth quarter of 2019 (-5½%) owing to the ongoing bottlenecks in the supply of intermediate goods.

Industrial orders up steeply in November

Industrial orders rose steeply in November 2021, increasing by a seasonally adjusted 3¾% on the month. On an average of October and November, however, they contracted sharply compared with the third quarter (-6%). Excluding large orders, the decline was much smaller though (-1½%). Orders for capital goods fell particularly strongly (-9%). This was partly due to a substantial decrease in orders for the manufacture of other transport equipment, which is often influenced by large orders. On the other hand, the automotive sector received slightly more orders than in the third quarter. Manufacturers of intermediate goods received markedly fewer new orders (-2½%). In contrast to this, demand for consumer goods picked up distinctly (+2%). Broken down by region, domestic orders and, in particular, orders from non-euro area countries saw a steep drop, whereas orders from the euro area rose somewhat. Despite this decrease, demand for German industrial products remained high, especially compared with the depressed level of industrial output. This demand exceeded the pre-crisis level from the fourth quarter of 2019 by 6¾%.

Nominal industrial sales and goods exports up steeply

Nominal industrial sales, unlike industrial output, rose steeply in November 2021, with a seasonally adjusted increase of 4¾% on the previous month. On an average of October and November, too, they picked up strongly from the third quarter (+5%). The increase was broadly based across regions, but was strongest for non-euro area countries. Broken down by sector, sales of intermediate goods and of capital goods were up steeply. Unit sales of motor vehicles and motor vehicle parts increased considerably, in particular. By contrast, sales of consumer goods rose only slightly. A sharp drop in sales of pharmaceutical products had an impact here. In November, nominal

goods exports rose distinctly on the month (+1¾%) after adjustment for seasonal variations. In October and November combined, they increased steeply on the summer months (+4¼%) in line with the growth in sales. In real terms, they surpassed the third-quarter level by a distinct margin (+1½%), owing to a significant increase in exports of goods to non-euro area countries. Real exports to euro area countries stagnated, however. November saw a steep rise in nominal goods imports. They were up 3¼% on the month and, on an average of October and November, were even 8% higher than in the third quarter. By contrast, price-adjusted imports exceeded the third-quarter level only a little (+1%), because import prices for energy were considerably higher.

Construction

Construction output down somewhat

After adjustment for seasonal variations, output in the construction sector decreased somewhat in November 2021 when compared with the previous month (-¾%). On an average of October and November, though, it was up markedly on the third quarter (+1%). This was largely due to a significant increase in output in the main construction sector. In the finishing trades, by contrast, output was marginally lower. The order situation in the main construction sector is still good. Although order intake fell slightly in October – the latest month for which data are available – from the third-quarter level, the reach of the order books in December remained at the previously achieved peak, according to ifo Institute surveys. Utilisation of equipment and machinery increased further and thus remained well above its multi-year average.

Labour market

On the labour market, the relatively favourable developments in employment and unemployment were continuing until recently, despite the increase in the infection rate. Employment rose by 43,000 persons in November 2021 after seasonal adjustment. Employment growth was especially positive for jobs subject to social security contributions. In October, these increased just as strongly as overall employment. New staff were recruited mainly in business-related services, information and communication services, and in accommodation and food service activities. No recovery is discernible in manufacturing as yet. The number of short-time workers saw another distinct drop to 710,000 persons in October, according to an initial estimate by the Federal Employment Agency. However, leading indicators are signalling a temporarily weaker increase in employment. The employment barometers of the ifo Institute and the Institute for Employment Research (IAB) recently fell significantly. The number of persons named in notifications of cyclical short-time work doubled in December as containment measures intensified compared with the previous month. As against the situation one year earlier, however, there are still far fewer notifications. At the same time, the growing number of vacancies and frequent reports of labour shortages are pointing to a fundamentally strong level of labour demand in Germany.

Continuation of moderate employment growth, but notifications of short-time work significantly higher in December

Slight fall in unemployment

Registered unemployment was down by 23,000 persons in December after adjustment for seasonal variations. The decline was thus somewhat slower than in previous months. The unemployment rate fell by 0.1 percentage point to 5.2%. Over the past few months, there was mainly a drop in unemployment covered by the statutory insurance scheme, which is influenced by cyclical factors. It is now already markedly below the level of the first quarter of 2020, when the figures were not yet affected by the pandemic. By contrast, the number of unemployed persons covered by the basic welfare allowance is still well above the pre-pandemic level owing to the higher proportion of long-term unemployed. The IAB's unemployment barometer fell further in December, putting it back in slightly negative territory for the first time since August 2020. Unemploy-

ment could go up marginally over the coming months.

Prices

Marked rise in crude oil prices recently

Crude oil prices recently picked up markedly, after having fallen distinctly in November and December owing to concerns about demand surrounding the emergence of the Omicron variant. Prices were driven up by the surprisingly robust global demand for crude oil and by supply shortages in a number of oil-producing countries. As this report went to press, the price of a barrel of Brent crude oil stood at US$88, the highest price for the past seven years. This represented a year-on-year increase of around 50%. Crude oil futures were trading at marked discounts, however. The discount on crude oil futures was US$4 for deliveries six months ahead and US$8 for deliveries 12 months ahead. Unlike crude oil prices, market prices for natural gas have retreated somewhat since the end of last year. However, they were still many times higher than their prior-year level as this report went to press.

Import and producer prices still rising significantly

Import prices continued to rise markedly in November. The increase in the prices of energy products was not as exceptionally steep as in October, but was still unusually high. Price pressures for other goods remained just as pronounced as in previous months. At the industrial producer level, for which December data are already available, price pressures picked up more strongly again on account of energy. In addition, the prices of non-energy goods were again raised substantially. Overall, the annual growth rate recently came to just under 25% for both imports and industrial products. Excluding energy, the increase amounted to around 10% in each case.

Inflation rate still very high

The inflation rate remained at a very high level. Compared with the previous month, however, consumer prices as measured by the Harmonised Index of Consumer Prices (HICP) rose only a little in December after adjustment for seasonal variations. In the months prior, they had risen very steeply. Energy prices decreased markedly for the first time in some months on the back of falling crude oil prices. The previous steep rise in prices for services also weakened somewhat. Food prices, by contrast, picked up fairly significantly, and price pressures for non-energy industrial goods, excluding clothing, remained high. Annual headline HICP inflation receded from 6.0% to 5.7%. This was mainly because of the elimination of a statistical effect which had pushed the rate up by just over ¼ percentage point in the previous month. This effect was due to the coronavirus pandemic having led to fairly major adjustments to some HICP weights, particularly for package holidays, for 2021 in line with consumption habits of the previous year.[4] This also caused the rate excluding energy and food to drop from 4.1% to 3.9%. This one-off effect had no impact on the national consumer price index (CPI), however. At 5.3%, its rate was similar to what it had been in November. The relatively large difference between this and the HICP is because the higher inflation in goods prices compared with services has a greater impact on the HICP. Goods account for a higher share in the HICP than in the CPI, mainly because the HICP so far has not included the costs of owner-occupied housing, which is counted towards services.[5]

Above average price rises in 2021

On an annual average, HICP inflation rose steeply from 0.4% in 2020 to 3.2% in 2021.[6] This was only partly attributable to one-off effects such as the introduction of the climate package, the rebound in crude oil prices and the roll-back of the temporary VAT cut.[7] Moreover, the prices of services and non-energy in-

4 See Deutsche Bundesbank (2021).
5 In the CPI for Germany, owner-occupied housing is captured applying the rental equivalence approach and with a weight of around 10%. One of the key outcomes of the monetary policy strategy review completed in the summer of 2021 is, however, the Eurosystem's wish for owner-occupied housing to also be included in the HICP in future, using the net acquisition approach. See also European Central Bank (2021).
6 Annual CPI inflation was 3.1% in 2021, up from 0.5%
7 See Deutsche Bundesbank (2019, 2020).

dustrial goods increased exceptionally steeply at various times during the year, primarily on account of delivery bottlenecks and price hikes intended to compensate for previously lost profits. As these factors are continuing into the new year, HICP inflation is likely to remain exceptionally high at the start of 2022, despite the elapsing of the aforementioned one-off effects. On top of this, the considerably higher market prices for natural gas will mean a commensurate hike in consumer rates.

Public finances

Local government finances

Balanced local government budgets in Q3 2021: strong rise in revenue …

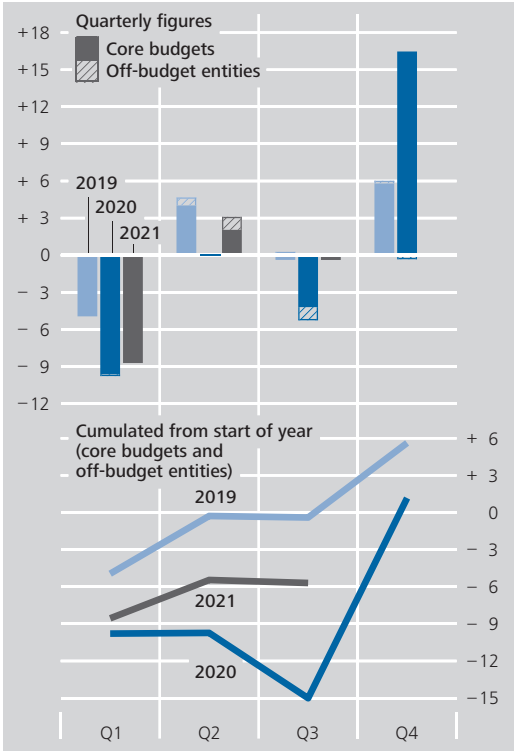
Local government core budgets and off-budget entities ended the third quarter of 2021 close to balance. At the same time last year, they had posted a high deficit of €4½ billion. Revenue rose strongly, by 11% (+€7 billion), of which more than half was attributable to tax receipts. Net receipts from local business tax saw particularly steep growth (+38%, or +€3 billion). Local government tax receipts were therefore also higher than they had been prior to the coronavirus crisis, exceeding Q3 2019 revenue by almost €2 billion (+7%). Meanwhile, receipts from local business tax, a large revenue item, were almost one-quarter higher. In the first half of the year, revenue was still slightly below its pre-crisis level of 2019. Transfers from state government, too, rose substantially on the year (+10%, or just under +€3 billion). This was due, above all, to a one-off effect: in 2020, extensive general purpose grants were brought forward into the second quarter in North Rhine-Westphalia.

… outweighed expenditure growth

Expenditure rose significantly overall, by 4% (+€3 billion). Personnel costs, a major item, saw above-average growth of 5%, and growth in other operating expenditure was even more dynamic (+7%). By contrast, spending on social benefits increased much more slowly, by 2%, whilst accommodation costs for those receiving unemployment benefit II decreased slightly.

Local government fiscal balance

€ billion



Source: Federal Statistical Office.
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As in the first half of the year, fixed asset formation contracted (-2½%, or just under -€½ billion). Construction investment, in particular, experienced a decline.

Largely balanced budget anticipated for 2021 as a whole

In the first three quarters of 2021 combined, local government budgets recorded a deficit of €6 billion, €8 billion down on the year. A clear surplus can be expected for the fourth quarter of 2021, as is usual for the time of year.[8] All in all, therefore, local governments could have closed 2021 with a more or less balanced budget. They are thus likely to have withstood the second pandemic year well overall. In fact, local government taxes and receipts from fees

8 The very high surplus in the fourth quarter of 2020 was attributable to two one-off effects: in 2020, central and state government compensated local government for anticipated crisis-induced shortfalls in local business tax revenue. In addition, central government permanently increased its contribution to the accommodation costs for recipients of unemployment benefit II. The respective annual amounts payable to local government stood at €11 billion and €3 billion, and were received in full in the fourth quarter.

Sales and purchases of debt securities

€ billion

Item	2020 Nov.	2021 Oct.	2021 Nov.
Sales			
Domestic debt securities[1]	26.2	2.8	33.3
of which:			
Bank debt securities	– 1.0	7.4	4.3
Public debt securities	27.0	3.0	20.6
Foreign debt securities[2]	– 5.7	– 3.4	8.2
Purchases			
Residents	26.6	8.4	35.8
Credit institutions[3]	1.5	– 17.9	– 0.5
Deutsche Bundesbank	27.7	20.8	23.4
Other sectors[4]	– 2.5	5.5	13.0
of which:			
Domestic debt securities	5.1	– 0.6	3.6
Non-residents[2]	– 6.1	– 9.0	5.6
Total sales/purchases	20.6	– 0.6	41.4

1 Net sales at market values adjusted for changes in issuers' holdings of their own debt securities. **2** Transaction values. **3** Book values, statistically adjusted. **4** Residual.

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may even have largely approached the levels expected prior to the crisis.

Outlook for 2022 not unfavourable; action needed to step up investment

The outlook for the current year is not unfavourable either, despite uncertainty surrounding the further course of the pandemic and macroeconomic developments. Further action is needed to expand local government infrastructure. Construction bottlenecks could continue to present an obstacle, yet it would be helpful if the approval process were accelerated in good time, as intended by the new Federal Government.

Securities markets

Bond market

High net issuance in the German bond market in November 2021

In November 2021, issuance in the German bond market stood at €135.0 billion in gross terms (previous month: €134.9 billion). After deducting redemptions, which were significantly lower than in the previous month, and taking account of changes in issuers' holdings of their own debt securities, the outstanding volume of domestic bonds grew by €33.3 billion. The outstanding volume of foreign debt securities in Germany also rose by €8.2 billion. The funds raised from sales of domestic and foreign debt securities in the German market therefore amounted to €41.4 billion.

Higher public sector capital market debt

The public sector issued bonds totalling €20.6 billion net in the reporting month. On balance, this was chiefly attributable to central government (€19.2 billion), which mainly issued two-year Federal Treasury notes (Schätze: €5.3 billion), five-year Federal notes (Bobls: €4.8 billion), as well as Treasury discount paper (Bubills: €4.1 billion) and ten-year Federal bonds (Bunds: €4.1 billion). State and local government issued bonds worth €1.4 billion net.

Net issuance by enterprises

Domestic enterprises augmented their capital market debt by €8.3 billion net in the reporting month, following net redemptions of €7.5 billion in the previous month. Non-financial corporations were the chief issuers of new bonds, on balance, but other financial intermediaries were also active in the market. The majority of the bonds issued had maturities of more than one year.

Slight rise in credit institutions' capital market debt

The outstanding volume of debt securities issued by domestic credit institutions grew by €4.3 billion in November, following an increase of €7.4 billion in the preceding month. On balance, issuance was almost exclusively confined to debt securities issued by specialised credit institutions (€7.0 billion), while mortgage Pfandbriefe saw net redemptions of €3.4 billion.

Purchases of debt securities

Among the various investor groups, the Bundesbank was the main buyer in November on balance. It acquired debt securities amounting to €23.4 billion net, predominantly under the Eurosystem's asset purchase programmes. Domestic non-banks and foreign investors increased their holdings of bonds by €13.0 billion

and €5.6 billion, respectively. By contrast, domestic credit institutions sold debt securities for €0.5 billion in net terms; these were exclusively foreign securities on balance.

Equity market

Net issuance of German equities

In the reporting month, domestic enterprises placed €2.4 billion worth of new shares in the German equity market (October: €5.5 billion). The outstanding volume of foreign shares in the German market rose by €4.1 billion over the same period. Domestic non-banks and domestic credit institutions were, on balance, the main purchasers of equities (€13.0 billion and €2.7 billion, respectively), while foreign investors marginally reduced their equity exposure in Germany (€9.2 billion).

Mutual funds

Inflows to mutual funds

In November 2021, domestic mutual funds sold shares totalling €13.2 billion net in the market (previous month: €20.2 billion). In net terms, fresh funds were injected chiefly into specialised funds reserved for institutional investors (€9.4 billion). Among the various asset classes, mixed securities funds in particular recorded inflows (€5.4 billion), as did equity funds (€3.5 billion) and open-end real estate funds (€2.1 billion). Foreign mutual funds placed shares worth €15.8 billion in the German market in the reporting month. On balance, domestic non-banks were virtually the sole purchasers, adding a net €28.2 billion worth of mutual fund shares to their portfolios. Domestic credit institutions acquired mutual fund shares for €1.7 billion net, while foreign investors sold domestic fund shares for €1.0 billion net.

Balance of payments

Rise in current account surplus

Germany's current account recorded a surplus of €18.9 billion in November 2021, up €1.3 billion on the previous month's level. The surplus

Major items of the balance of payments

€ billion

Item	2020 Nov.	2021r Oct.	2021r Nov.p
I. Current account	+ 21.7	+ 17.6	+ 18.9
1. Goods	+ 18.5	+ 13.9	+ 13.6
Receipts	110.5	121.1	126.4
Expenditure	92.0	107.2	112.8
Memo item:			
Foreign trade[1]	+ 16.8	+ 12.7	+ 12.0
Exports	112.1	121.4	125.7
Imports	95.3	108.7	113.7
2. Services	+ 2.2	− 0.5	+ 1.6
Receipts	22.3	29.7	29.9
Expenditure	20.1	30.2	28.2
3. Primary income	+ 8.5	+ 9.9	+ 9.8
Receipts	15.5	17.1	16.9
Expenditure	6.9	7.1	7.1
4. Secondary income	− 7.6	− 5.6	− 6.1
II. Capital account	− 2.1	+ 0.5	− 1.0
III. Financial account (increase: +)	+ 14.7	+ 5.2	+ 50.4
1. Direct investment	+ 3.3	− 5.7	+ 25.7
Domestic investment abroad	+ 34.1	+ 7.1	+ 39.9
Foreign investment in the reporting country	+ 30.8	+ 12.7	+ 14.2
2. Portfolio investment	+ 18.1	+ 28.0	+ 31.9
Domestic investment in foreign securities	+ 12.5	+ 13.4	+ 27.4
Shares[2]	+ 8.7	+ 6.3	+ 3.4
Investment fund shares[3]	+ 9.5	+ 10.5	+ 15.8
Short-term debt securities[4]	− 1.6	+ 1.3	− 2.9
Long-term debt securities[5]	− 4.1	− 4.7	+ 11.1
Foreign investment in domestic securities	− 5.6	− 14.5	− 4.6
Shares[2]	− 0.3	− 5.0	− 9.2
Investment fund shares	+ 0.8	− 0.5	− 1.0
Short-term debt securities[4]	− 6.6	− 8.9	+ 12.5
Long-term debt securities[5]	+ 0.5	− 0.1	− 6.8
3. Financial derivatives[6]	+ 8.9	+ 1.8	+ 11.4
4. Other investment[7]	− 15.8	− 19.2	− 19.5
Monetary financial institutions[8]	− 18.0	+ 23.0	− 27.3
of which: Short-term	− 7.8	+ 11.2	− 17.2
Enterprises and households[9]	− 4.6	− 9.7	− 10.5
General government	− 3.3	+ 4.5	− 4.3
Bundesbank	+ 10.1	− 37.0	+ 22.6
5. Reserve assets	+ 0.1	+ 0.3	+ 1.0
IV. Errors and omissions[10]	− 4.9	− 12.9	+ 32.5

1 Special trade according to the official foreign trade statistics (source: Federal Statistical Office). **2** Including participation certificates. **3** Including reinvestment of earnings. **4** Short-term: original maturity of up to one year. **5** Long-term: original maturity of more than one year or unlimited. **6** Balance of transactions arising from options and financial futures contracts as well as employee stock options. **7** Includes, in particular, loans and trade credits as well as currency and deposits. **8** Excluding the Bundesbank. **9** Includes the following sectors: financial corporations (excluding monetary financial institutions) as well as non-financial corporations, households and non-profit institutions serving households. **10** Statistical errors and omissions resulting from the difference between the balance on the financial account and the balances on the current account and the capital account.

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in the goods account declined slightly, but the surplus in invisible current transactions, which comprise services as well as primary and secondary income, increased more strongly.

Trade surplus recedes slightly

In November, the surplus in the goods account fell by €0.3 billion on the month to €13.6 billion because imports of goods recorded a sharper increase than exports.

Surplus in invisible current transactions up due to rise in services account balance

The surplus in invisible current transactions grew in November by €1.6 billion to €5.3 billion. The main reason for this was the shift in the services account from a deficit to a surplus of €1.6 billion, with lower travel expenditure playing a role in particular. By contrast, the deficit in the secondary income account rose slightly by €0.5 billion to €6.1 billion; this was primarily attributable to higher general government expenditure on current transfers relating to international cooperation. Furthermore, net receipts in the primary income account remained broadly unchanged at €9.8 billion.

Portfolio investment sees outflows

In November 2021, concerns about rising inflation rates and a tightening of monetary policy in the major economies continued to influence the international financial markets. It was against this backdrop that Germany's cross-border portfolio investment recorded net capital exports of €31.9 billion (after €28.0 billion in October). Domestic investors added, on balance, €27.4 billion worth of securities issued by non-residents to their portfolios, purchasing mutual fund shares (€15.8 billion), bonds (€11.1 billion) and shares (€3.4 billion), but offloading money market paper (€2.9 billion). Foreign investors disposed of German securities to the tune of €4.6 billion net, selling shares (€9.2 billion), bonds (€6.8 billion) and mutual fund shares (€1.0 billion), while purchasing money market paper (€12.5 billion).

Financial derivatives

In November, the balance of financial derivatives recorded net outflows (€11.4 billion).

Direct investment posts net capital exports

Direct investment generated net capital exports of €25.7 billion in the reporting month (October: net capital imports of €5.7 billion). Overall, domestic enterprises increased their foreign direct investment by €39.9 billion, with outflows of funds totalling €31.9 billion through the intra-group credit channel. Moreover, domestic firms increased their equity capital in foreign enterprises by €8.0 billion, almost half of which took the form of reinvested earnings. Non-resident enterprises injected their affiliated enterprises in Germany with direct investment funds worth €14.2 billion net. They issued intra-group loans (€12.7 billion) and boosted their equity capital slightly (€1.6 billion).

Other investment registers inflows

Other statistically recorded investment – which comprises loans and trade credits (where these do not constitute direct investment), bank deposits and other investments – registered net inflows of capital amounting to €19.5 billion in November (following €19.2 billion in October). Monetary financial institutions (excluding the Bundesbank) recorded net capital imports (€27.3 billion). Transactions by enterprises and households (€10.5 billion) and by general government (€4.3 billion) also led to net inflows of funds from abroad. By contrast, the Bundesbank recorded a rise of €22.6 billion in its net claims. TARGET2 claims on the ECB increased even more strongly (by €60.9 billion). However, non-resident counterparty deposits at the Bundesbank expanded as well.

Reserve assets

The Bundesbank's reserve assets grew slightly – at transaction values – by €1.0 billion in November.

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Changes in the secured money market

Aggregate secured euro money market rates have repeatedly been below the Eurosystem's deposit facility rate in recent years. Key reasons for this are the increasing use of non-standard monetary policy measures and various alternative investment options for market participants. In the area of monetary policy, the Eurosystem's asset purchases and the high level of excess liquidity play particular roles. However, against this backdrop, another important factor is the increasing concentration of money market activity in transactions between market participants that have access to accounts at the central bank and those that do not.

Aggregate secured money market rates such as the German RepoFunds Rate and the STOXX GC Pooling EUR ON index have been persistently below the deposit facility rate since 2015 in particular, whereas, prior to that time, such occurrences had only been observable for shorter periods. As aggregate money market rates encompass transactions that vary in terms of the type and reusability of the collateral used or the composition of the market participants, they are also affected to differing degrees by the impact of non-standard monetary policy measures. There are therefore some considerable differences in the spreads between the various money market rates and the deposit facility rate.

When viewed in isolation, monetary policy asset purchase programmes reduce the supply of certain collateral in the money market. As a result, the interest rates of corresponding repo transactions may decline. This effect primarily impacts repo transactions that are conducted for the purpose of borrowing specific securities and having these at one's disposal for the term of the transaction. High excess liquidity, by contrast, has a particular impact on secured money market transactions that are conducted for liquidity management purposes, as banks have fewer incentives to redistribute liquidity among themselves. As a result, the relative share of transactions between market participants that have access to the central bank's balance sheet and those that do not rises, and thus so too does the significance of transactions for which the deposit facility does not represent a lower bound.

As stipulated in the European treaties, the Eurosystem acts in accordance with the principles of a market economy. Therefore, in addition to managing the general interest rate level, it is not fundamentally the task of the Eurosystem to also purposefully influence price formation in individual financial market segments. If interest rate spreads widen in the financial markets, this is desirable in principle and an expression of functioning markets.

However, in the event that interest rates for secured money market transactions are very low on account of the scarcity of collateral, the Eurosystem strives to counteract the monetary policy asset purchase programmes' undesirable consequences for the repo market. To this end, it allows market participants to borrow certain bonds through securities lending arrangements. The Eurosystem's securities lending is not, however, intended to be a tool for managing interest rate conditions in the secured money market, but merely to serve as a backstop to mitigate the scarcity of collateral in the repo market caused by the asset purchases.

Introduction

Temporary exchange of funds for collateral

In the secured money market, market participants trade funds in the form of credit balances, in exchange for which the lender receives collateral from the borrower. The collateral is provided in the form of securities, meaning that securities are temporarily exchanged for account balances in secured money market transactions. The contracting parties agree a rate of interest for the transfer of account balances, and this has typically been negative in recent years. One motive for conducting such a transaction may be to temporarily increase one's own stock of liquid assets in the form of account balances. Conversely, a transaction may also be conducted to obtain certain securities on a temporary basis. The secured money market can therefore be used both for liquidity management and collateral management.

Different motives for different market participants

Alongside banks, participants in the secured money market also include financial corporations and, to a lesser extent, non-financial corporations and public sector institutions. Motives for conducting secured money market transactions may vary depending on the type of market participant. Non-financial corporations and public sector institutions use the market primarily for liquidity management purposes and the secure investment of liquid assets. In addition, financial corporations frequently conduct securities-related transactions, for example if they are in the securities trading business. This makes it possible for specifically required securities, for example, to be borrowed. Investors such as pension funds or insurers that hold long-term securities portfolios can earn additional revenue by lending securities. At banks, all of the aforementioned motives can manifest themselves in individual combinations, depending on the business model. However, some banks additionally act as intermediaries, conducting their own asset and liability business in the secured money market.[1]

Since 2016, the Eurosystem's money market statistics have recorded the money market transactions of the 47 euro area banks that had the largest main balance sheet assets (total assets minus other assets) as at 31 December 2014.[2] In the context of money market statistics, the Bundesbank additionally records the transactions of a further 97 German institutions at present. Overall, the money market statistics for December 2020 show an outstanding volume of euro-denominated secured money market transactions of €1.8 trillion.[3] A conceptually comparable figure is provided by the International Capital Market Association (ICMA), which puts the euro-denominated outstanding volume at €4.5 trillion on the basis of a survey of 60 participating European institutions.[4] The difference to the money market statistics can likely be explained in part by the fact that the ICMA figures include money market actors in the United Kingdom as well as the largest clearing houses.[5] Data on the size and trading volumes of the secured money market usually vary considerably, as the measurement concepts differ with regard to the currency and type of collateral covered, as well as the domicile and the sectoral affiliation of the market participants.

Outstanding volume of secured money market at €1.8 trillion

1 These are often large, internationally active banks with market shares in the secured market that have increased from high levels in recent years.
2 The legal basis for the collection of data is provided by Regulation (EU) No 1333/2014 (ECB/2014/48) concerning statistics on the money markets as amended by Regulation (EU) No 1599/2015. The sample originally comprised 53 banks. Due to mergers, this figure has since fallen to 47. A monetary financial institution (MFI) is required to report data on money market transactions if its total main balance sheet assets as at 31 December 2014 exceeded 0.35% of the total main balance sheet assets of all euro area MFIs.
3 As at 9 December 2020. Borrowing plus lending. As a result, it is possible that transactions are counted multiple times. Also includes the larger German sample of money market statistics. Excluded are intra-group transactions, securities lending without cash collateral, and collateral swaps and transactions with terms exceeding 397 days. Multiple counting of "open repos" (i.e. secured money market transactions that are automatically extended until one counterparty ends the transaction) is treated as in Tischer (2021).
4 See International Capital Market Association (2021), calculated from the total volume of outstanding repo transactions (€8.3 trillion, p. 8) and the share of euro-denominated transactions (54.4%, p. 25). As at 9 December 2020.
5 In the ICMA figures, too, transactions are counted twice in some cases and, through the inclusion of the clearing houses, potentially also multiple times.

Increasing importance of secured money market transactions for banks' liquidity management since 2008

Prior to the introduction of money market statistics, the ESCB gathered data from European banks through the Euro Money Market Survey.[6] The data collected by this survey included quarterly trading volumes of secured and unsecured money market transactions in interbank trading. According to the survey results, turnover increased by 25% in the secured money market from 2008 to 2015, but fell by as much as 80% in the unsecured money market, which had become markedly less attractive for banks to use as a result of regulatory measures (Basel III) and changes in money market management.[7] In the money market statistics data, which also encompass banks' money market transactions with financial corporations, general government and large non-financial corporations, this trend continued between 2016 and 2021. While turnover in the secured segment increased by roughly 63%, turnover in the unsecured segment declined by about 4%. For interbank trading, these respective developments were markedly more pronounced still.

Repo transactions are the most important instrument in the secured money market

The secured money market encompasses various instruments, of which the repo transaction (or repo for short) is the most important.[8] A repo consists of two transactions in which funds are exchanged for collateral. At the start of the transaction, the lender transfers the loan amount to the borrower and receives a security from the borrower as collateral. Haircuts may be applied, which means that the amount of funds may be lower than the value of the collateral. This provides the lender with some protection from possible fluctuations in the value of the collateral. In addition, the counterparties may agree an obligation to make additional payments in case the value of the collateral declines during the term of the repo transaction. Otherwise, the lender could incur losses if the borrower were to default and the recovered amounts from the collateral were insufficient to cover the credit losses. At the end of the term, the funds and the collateral are exchanged back. The borrower additionally pays interest on the borrowed funds.

General collateral and specific collateral transactions

Depending on the agreed collateral, there are two types of repo transaction. In general collateral (GC) transactions, the borrower can supply any collateral from a predefined basket of collateral, such as Federal bonds (Bunds) with residual maturities of up to ten years. While the lender does not know exactly which security it will receive, it can gauge the credit quality and potentially the market liquidity of the security in advance comparatively well. In specific collateral (SC) transactions, the lender receives a specific security previously stipulated on the basis of the securities identification number. The motives for concluding SC and GC transactions are usually different. GC transactions are used primarily for liquidity management, especially on the part of the lender. SC transactions are often conducted with the aim of borrowing a specific security, for example to fulfil a delivery obligation. However, borrowers may also use them for liquidity management purposes, for example if they try to use their available collateral for refinancing in a cost-effective manner, given different interest rates for SC and GC transactions.[9]

Developments in secured money market substantially influenced by monetary policy

Due to its size and its increased importance for banks' liquidity management compared to the unsecured market, the secured money market is relevant for the analysis of monetary policy transmission, particularly with regard to the transmission of key interest rates to banks' marginal liquidity and funding costs, and thus to the interest rate conditions in the financial and credit markets. In addition, many securities used as collateral are also acquired by the Eurosystem through the monetary policy asset pur-

6 See European Central Bank (2015). The quarterly turnover data of the Money Market Survey are not directly comparable with the outstanding volumes based on money market statistics or the ICMA figures.
7 The development of the unsecured money market is explored in more detail in Deutsche Bundesbank (2019).
8 "Repo" is shorthand for "sale and repurchase agreement". Other secured money market transactions, which, however, hardly differ from repos, include securities lending and securities swaps.
9 The growth in turnover in the secured money market is primarily attributable to SC transactions, while turnover in GC transactions has declined, partly in line with unsecured transactions.

chase programmes. As interest rate conditions for bonds in the repo market can influence the price formation of these instruments in the bond market, the repo market is of relevance for the implementation of the asset purchase programmes. At the same time, the interest rate conditions and the incentives to trade in the secured money market are influenced by the general conditions stipulated by the central bank for holding central bank reserves. It is therefore important for monetary policymakers to understand the conditions and developments in the secured money market and the interactions with monetary policy.

This article therefore outlines developments in the secured money market in recent years and explores the impact of the use of monetary policy instruments and the business activity of central banks on the secured money market. The secured money market is impacted in particular by changes in key interest rates, the monetary policy asset purchase programmes, and the resulting structural excess liquidity.

Central banks set key parameters for the secured money market

Secured money market is used, inter alia, for liquidity management

As part of liquidity management, market participants ensure their short-term solvency and manage their liquidity reserves. If a market participant has unneeded liquidity in the form of sight deposits at a commercial or central bank, they have various options for short-term investment. For example, the funds can be held as a time deposit at a commercial bank, invested in bonds with short residual maturities, money market paper or money market fund shares, or placed in the secured money market through a repo transaction.

Only certain participants of the secured money market have central bank access

Only some market participants are able to hold credit balances at Eurosystem central banks. Alongside commercial banks, these include, in particular, public administrations and private-law entities that perform duties of public administrations or process payments for public administrations. The central bank acts as a fiscal agent for these entities.[10] Then there are official institutions outside the euro area that have their euro reserves managed by a Eurosystem central bank within the framework of Eurosystem reserve management services (ERMS). Monetary policy counterparties and non-monetary policy counterparties that have central bank accounts are sometimes subject to different (interest) conditions, which set different general conditions for their respective money market activity.[11]

Interest rate conditions of the central bank crucial for liquidity-driven money market transactions of monetary policy counterparties …

The Eurosystem offers its monetary policy counterparties – i.e. credit institutions eligible to carry out monetary policy operations – liquidity via monetary policy refinancing operations or the marginal lending facility. The applicable conditions usually limit the interest rates at which monetary policy counterparties are prepared to absorb liquidity in the money market. If money market rates rise above those at which monetary policy counterparties can borrow from the central bank – assuming they can provide sufficient collateral – they will prefer to obtain funding from the central bank. Much the same applies for financial investment. If money market rates fall below the deposit facility rate, it is then more favourable for monetary policy counterparties to hold funds with the central bank than to place them in the money market. For short-term secured money market transactions conducted by Eurosystem monetary policy counterparties for liquidity management purposes, the agreed interest rate thus generally lies between the central bank's policy rates for the provision and absorption of liquidity.

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10 See General Terms and Conditions of the Deutsche Bundesbank in conjunction with Sections 19 to 22 of the Bundesbank Act *(Bundesbankgesetz)*.

11 See Guideline (EU) 2019/671 of the European Central Bank of 9 April 2019 on domestic asset and liability management operations by the national central banks (recast) (ECB/2019/7) and Guideline (EU) 2020/1284 amending Guideline (EU) 2018/797 on the Eurosystem's provision of reserve management services in euro to central banks and countries located outside the euro area and to international organisations (ECB/2020/34).

… and non-monetary policy counterparties

Non-monetary policy counterparties – such as domestic public administrations or foreign central banks – have no direct option for taking out loans at a Eurosystem national central bank. They may, however, hold credit balances in accounts at the respective central bank. Therefore, for these counterparties, the central bank's interest conditions for account balances, which may differ from the deposit rate applicable for monetary policy counterparties, are initially of particular relevance. This applies, for example, for central banks outside the euro area that want to hold official euro reserves. Eurosystem national central banks, such as the Bundesbank, allow such market participants to hold euro balances in a central bank account within the ERMS framework.[12] The interest rate on central bank accounts for ERMS participants is lower than the deposit facility rate.[13] Therefore, for these market participants, investment in the market already becomes attractive when net interest income is higher than the lower interest rate applicable for ERMS participants and not only once money market rates exceed the deposit facility rate (currently -0.5% per year).

Interest of large corporations in secured money market transactions

Market participants without any central bank access – such as large corporations – may make similar considerations. For them, however, it is not the conditions of the central bank that are relevant, but those of commercial banks. As deposit guarantees, depending on the applicable rules of the respective compensation scheme, do not apply to large deposits to an unlimited extent, risk considerations may also make investment in money market instruments appear advantageous even where the interest rate is lower than the conditions applicable to commercial banks. For the secure short-term investment of euro liquidity, these market participants may therefore potentially be prepared to accept rates lower than the deposit rate. This also applies in particular to investments in the secured money market, where it is fundamentally possible to invest even larger euro amounts very safely.

Reduced incentives for money market transactions between market participants with central bank access in the low-interest-rate environment …

Until the deposit facility rate was lowered to 0% in July 2012, different interest rate conditions applied to the deposit facility, which is only available to banks, and credit balances in current accounts at the central bank. For the most part, no interest was paid on credit balances in current accounts at the central bank. Non-banks with current accounts at the central bank therefore had an incentive to invest liquid funds in the money market even at positive rates lower than the deposit facility rate. As central bank accounts, including those held by the public sector in particular, have been remunerated at the deposit facility rate since July 2012, there is, from an earnings and risk perspective, now virtually no interest rate advantage for public sector central bank account holders to deposit liquid funds at commercial banks rather than the central bank. However, participants that do not have current accounts with the central bank may continue to have incentives to trade.[14]

… in combination with high levels of excess liquidity …

Alongside the interest rate conditions set by the central bank, excess liquidity in the banking system – i.e. the amount of central bank reserves in excess of the banking system's reserve requirement – also affects market participants' incentives to trade. A notable amount of excess liquidity can, on the one hand, be caused by demand from commercial banks if they request, and are allocated, more liquidity in the Eurosystem's refinancing operations on aggregate than is needed to meet the reserve requirement. This is particularly the case with the policy of full allotment for refinancing operations that has been employed by the Eurosystem since autumn 2008. On the other hand, excess liquidity may be generated independ-

12 Furthermore, euro credit balances can be placed in the money market for a small fee. See https://www.ecb.europa.eu/paym/erms/html/index.en.html
13 This interest rate applies to credit balances above an exemption limit, which is intended to ensure that Eurosystem central banks do not compete against commercial banks through the ERMS.
14 For more information in this regard and on the heterogeneity of interest rate conditions in the unsecured money market in general, see also the analyses in Abbassi et al. (2020).

ently of demand through asset purchases by the central bank. The more reserves that market participants – particularly banks, but increasingly also public sector entities and foreign central banks – hold, or are required to hold, with the central bank on aggregate, the lower their incentive is to proactively obtain additional funds on the money market. In particular, money market turnover – including secured money market transactions within the scope of liquidity management – between banks that hold substantial amounts of excess liquidity falls away.

… can cause interest rates in the money market to drop below the deposit facility rate

The various incentives for activity on the money market have two significant implications for the interest rates at which money market trading takes place. First, an increase in excess liquidity ensures a reduction in money market rates since the money supply grows and demand falls. Second, market activity shifts towards transactions for which incentives to trade still exist under certain interest rate conditions and in light of the excess liquidity. Most of these are transactions where the lender has no central bank access and is seeking an investment opportunity for euro balances, while the borrower has access to central bank funds and is compensated for borrowing additional liquidity by receiving an interest rate below the deposit facility rate. Thus, the deposit facility rate does not constitute a general lower bound for the interest rate conditions of liquidity-driven money market transactions.

Interest rate conditions on the secured money market are also determined by the supply of and demand for securities

In addition to the interest rates for deposits held at the central bank and the quantity of excess liquidity, the relative scarcity of securities used as collateral is significant for the interest rate conditions for secured money market transactions. Interest rate conditions in the secured money market are sometimes noticeably affected by shifts in the holder structure of the securities, such as those linked to the Eurosystem's monetary policy asset purchase programmes. A shortage of these securities can arise if securities purchasers do not lend their holdings on the repo market. This can cause the corresponding repo rates to be significantly below the deposit facility rate at times, too.[15] In order to limit potential scarcity-induced constraints on the functionality of repo and bond markets resulting from the Eurosystem's asset purchase programmes, the Eurosystem offers the bonds it has purchased to be borrowed against eligible collateral – including cash collateral.

Regulatory changes have a further impact on money market activity

In addition to the framework conditions set out by monetary policy, changes to the regulatory framework for credit institutions have had an impact on the secured money market over the past few years. The introduction of the leverage ratio (LR), the liquidity coverage ratio (LCR) and the buffer for global systemically important institutions (G-SII buffer) have proved particularly significant in this context.[16] These factors will not be discussed in further detail here since they have less of a bearing on the longer-term development of short-term interest rate conditions on the secured money market considered in this article.[17]

Development of secured money market rates from a monetary policy perspective

Interest rate spreads between aggregate money market rates also a result of measurement concepts

Over the past few years, activity on the secured money market has been influenced in a variety of ways by changed framework conditions and incentives. To external observers, market developments are visible in the form of aggregate secured money market rates that are each based on specific measurement concepts. Aggregate money market rates are often con-

15 At the same time, a purchase programme can also lead to rising demand for certain securities in the repo market if traders increasingly cover their delivery obligations for bonds via the repo market. See Infante and Huh (2021).
16 See Capital Requirements Regulation (CRR, Regulation (EU) No 575/2013), Capital Requirements Directive (CRD, Directive (EU) No 36/2013) and LCR delegated regulation (Commission Delegated Regulation (EU) No 2015/61).
17 Relevant information can be found, for example, in Committee on the Global Financial System (2017), Kotidis and van Horen (2018), Munyan (2015) and Ranaldo et al. (2019).

ceived as volume-weighted means of interest rates on transactions with specific maturities. These can include, for example, all transactions of a trading venue that feature a certain type of collateral. Furthermore, the measurement concepts can be based on the sectoral affiliation or domicile of the counterparties. Differences in shares of GC and SC transactions or of transactions with market participants with no access to the central bank can influence the result of the measurement to the same degree as differences in control over the received collateral or in the quality of the collateral. These aspects can often explain interest rate spreads between different aggregate secured money market rates.

RepoFunds Rate measures interest rate conditions of repo transactions with government bonds

The RepoFunds Rate is the volume-weighted mean of one-day secured money market transactions concluded on the electronic trading platforms BrokerTec[18] and MTS.[19] A significant proportion of electronic trading with European government bonds – including centrally cleared repo transactions – takes place on these trading platforms. The RepoFunds Rate incorporates GC and filtered SC transactions. For the RepoFunds Rate, the 25% of SC transactions that deviate the most from the volume-weighted mean interest rate are removed in an iterative process to prevent outliers from distorting the result to an overly strong degree. The maturity of the transactions is one business day, although the transactions can be settled up to two business days after they have been concluded.[20] Alongside euro area banks, market participants also include non-banks and banks domiciled outside the euro area that have no access to the deposit facility or Eurosystem current accounts. The RepoFunds Rate is calculated and published for government bonds of different Member States of the euro area. In addition, a European RepoFunds Rate is calculated that does not distinguish between issuers of government bonds. In the next section of this article, we will focus on the German RepoFunds Rate, i.e. the variant of the RepoFunds Rate that covers repo transactions with a basket of German government bonds.[21]

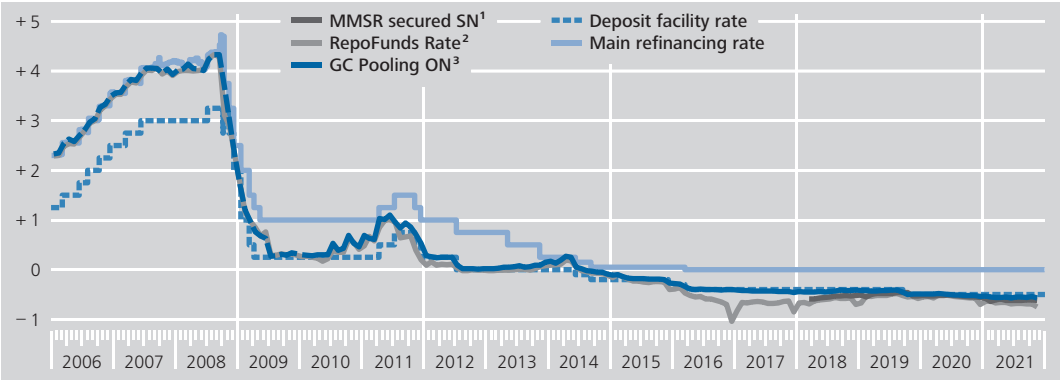
GC Pooling ON measures interest rate conditions for liquidity-driven secured money market loans

The secured money market rate STOXX GC Pooling EUR ON (hereinafter referred to as GC Pooling ON), which is based on overnight transactions concluded on the trading platform Eurex GC Pooling, is a second key interest rate metric for secured money market transactions.[22] Any securities in a collateral basket – i.e. a list of eligible securities – can be submitted as collateral for a participant's net money liability to the trading platform.[23] In contrast to the transactions on BrokerTec and MTS incorporated into the RepoFunds Rate, the securities posted as collateral are not actually transferred to the (economic) lender.[24,25] Strictly speaking, GC Pooling ON is thus not the rate of a real repo transaction, but a platform-specific interest rate for secured overnight credit. GC Pooling ON is calculated as a volume-weighted mean of all transactions for a given trading day with no adjustment for outliers. While turnover

18 BrokerTec is a trading platform operated by CME Amsterdam B. V. belonging to the US stock exchange group CME Group (CME – Chicago Mercantile Exchange).
19 MTS (originally standing for "Mercato generale di titoli di Stato", which roughly translates as "General market for government bonds") is a trading platform that is majority-owned by the stock exchange group Euronext N. V. with headquarters in Amsterdam.
20 Overnight (ON) transactions are settled on the day the transaction is concluded – tomorrow/next (TN) and spot/next (SN) transactions one day or two days after the transaction is concluded respectively – and each run until the following business day. The largest trading volume of SC transactions can usually be found in the SN segment, as a settlement period of two business days is also typical in the spot market for securities. If a repo transaction is concluded to fulfil the delivery obligation arising from a spot transaction in securities trading, both transactions are often concluded on the same day.
21 The basket covers fixed, variable-interest or inflation-linked German government bonds of any maturity that are dominated in euro.
22 The STOXX GC Pooling EUR ON index is available from 2010. For the preceding period, market activity on Eurex GC Pooling is depicted based on all ON transactions in the GC Pooling ECB Basket, for which a volume-weighted average interest rate is calculated, similar to the method used for the STOXX GC Pooling index.
23 In the case of GC Pooling ON used here, this is a portion of the collateral accepted by the Eurosystem for refinancing operations with a minimum rating of A-, referred to as the ECB basket.
24 From a legal perspective, Eurex Clearing AG is the contracting party in the case of GC Pooling ON; the economic counterparties on the other side of a transaction remain partly anonymous.
25 Therefore, it is precisely these securities – which, taken in isolation, are not scarce – that are likely to be submitted as collateral to GC Pooling in most cases.

Key interest rates and secured money market rates

% p.a.



Sources: Bloomberg, Eurex Repo GmbH, Qontigo, and Bundesbank calculations. **1** Volume-weighted quarterly average interest rate of secured money market transactions with spot/next maturity as captured in the Eurosystem's money market statistical reporting. **2** Repo transactions on BrokerTec or MTS with German government bonds as collateral. **3** Up to 2010: volume-weighted average of overnight transactions on Eurex GC Pooling in the ECB basket; from 2010: STOXX GC Pooling EUR ON index.

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has tended to decline in recent years, the number of GC Pooling participants has increased significantly over time, with non-banks – or market participants without access to Eurosystem central banks – also joining.

Factors influencing the interest rate spread between the RepoFunds Rate and GC Pooling ON

Usually, GC Pooling ON is slightly above the RepoFunds Rate (see the chart above). Since SC transactions are also included in the RepoFunds Rate, repos involving securities for which there is high demand – as measured by the available supply – are sometimes included. For example, this can be the case if market participants increasingly enter into short positions for a specific security and use a repo to cover the delivery obligation arising from the short sale. Likewise, increased demand can regularly occur at the maturity of interest rate futures if market participants have a larger amount of delivery obligations for certain bonds.[26] Greater demand for certain securities on the repo market can – if the supply is not fully elastic – lead to lower interest rates for repos collateralised by these securities than for transactions for which the security used as collateral is not scarce. Although a large share of transactions – the 25% with interest rates that deviate the most from the centre of market activity – is not included in the calculation of the RepoFunds Rate, this procedure is not necessarily designed to determine a representative interest rate for secured money market trading. Instead, it depicts conditions in the repo market secured by government bonds, which, depending on market conditions and market activity, can also reflect the scarcity of sought-after securities. Against this backdrop, an interest spread between the RepoFunds Rate and GC Pooling ON can reflect conceptual differences between both market segments, selection effects regarding the securities traded in those segments, as well as the framework conditions set out by monetary policy.

Episodes with significant interest rate spreads, particularly in 2008, 2011-12, and from 2015

Over the past 15 years, the RepoFunds Rate and GC Pooling ON have essentially followed the path of key interest rates (see the chart above). At times when liquidity conditions were balanced – e.g. up to October 2008 – these money market rates were close to the main refinancing rate. Since then, the interest rate spread between the secured money market rates and the relevant key interest rates (main refinancing and deposit facility rate, in particular) has regularly been influenced to a large extent by the excess liquidity in the banking system. Secured money market rates dropped to-

26 This refers to the "cheapest-to-deliver" bond, i.e. the bond that costs the least to deliver to cover a future short position. These bonds are often required for basis arbitrage transactions in which market participants take advantage of price differences between a bond and the associated future.

wards the deposit facility rate as the amount of excess liquidity grew – comparable with other short-term money market rates. However, individual episodes caused the secured money market rates to deviate from one another (see the upper adjacent chart). Although these deviations in 2008 and 2011 remained relatively limited in terms of duration and scale, more significant and persistent interest rate spreads between the two secured money market rates were observed from 2015.

Interest rate spreads in 2008 and 2011-12 caused indirectly by financial and sovereign debt crisis

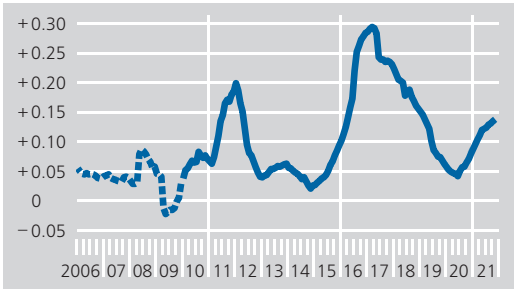
In October 2008, the RepoFunds Rate fell significantly below the deposit facility rate for a number of days, while GC Pooling ON remained within the interest rate corridor (see the lower adjacent chart). This was followed by another similar episode in 2011-12 (see the chart on p. 24). In this case, the interest rate spread between the deposit facility rate was mostly narrower than in 2008, but this phase lasted almost a year – thus considerably longer. Both of these periods lie within phases of crisis characterised by elevated counterparty risk in the banking and financial sector.[27] Such risks do not usually play an important role in the interest rates on secured money market transactions due to the collateral available and given their short maturities. Furthermore, wider interest rate spreads were often brought about by sharp falls in the RepoFunds Rate, whereas increased levels of counterparty risk are usually associated with a rise in money market rates. There is thus reason to believe that other factors were the main drivers behind the development of the interest rate spread between GC Pooling ON and the (German) RepoFunds Rate.

Increased demand for securities as a result of short positions?

In times of crisis, various factors can come together to potentially result in secured money market rates declining to a greater extent. This includes, in particular, increased demand for securities by market participants who, on account of elevated risks, shift their investments from the unsecured to the secured segment of the money market or into transactions involving securities with the highest credit quality. Furthermore, in a crisis situation, market

Interest rate spread between GC Pooling ON and the German RepoFunds Rate*

Percentage points, 11-month moving average



Sources: Bloomberg, Eurex Repo GmbH, Qontigo, and Bundesbank calculations. * Difference between GC Pooling ON (up to 2010: volume-weighted average of overnight transactions on Eurex GC Pooling in the ECB basket; from 2010: STOXX GC Pooling EUR ON index) and the German RepoFunds Rate (repo transactions on BrokerTec or MTS with German government bonds as collateral).

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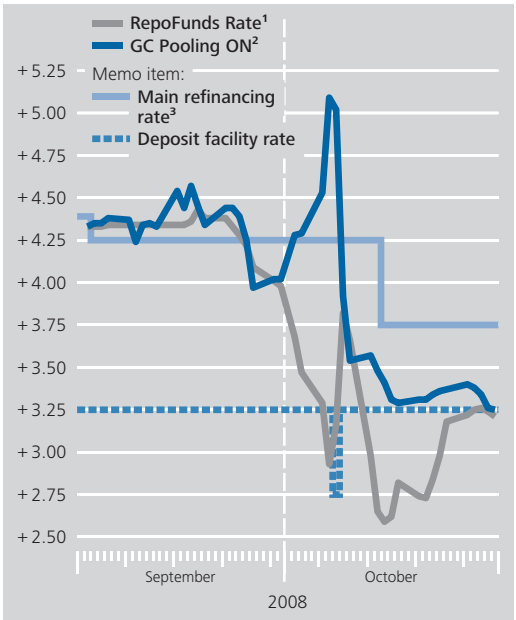
Secured money market rates during the financial crisis of 2008

% p.a., daily data



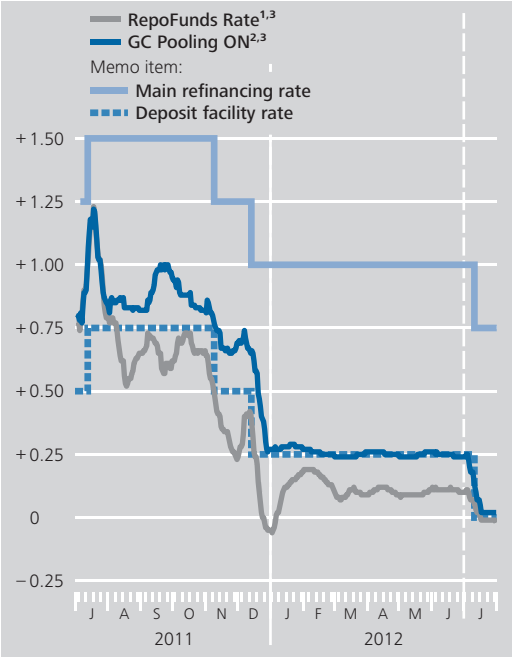
Sources: Bloomberg, Eurex Repo GmbH, and Bundesbank calculations. **1** Repo transactions on BrokerTec or MTS with German government bonds as collateral. **2** Volume-weighted average of overnight transactions on Eurex GC Pooling in the ECB basket. **3** Minimum bid rate for main financing operations until 14 October 2008.

Deutsche Bundesbank

27 Counterparty risk is often measured using the three-month EURIBOR-OIS spread where a three-month interest rate for a credit operation with credit risk built in is compared with a three-month interest rate swap with considerably reduced counterparty risk. This measurement exhibited elevated levels in both 2008 and 2011. See Eisenschmidt et al. (2018).

Secured money market rates during the sovereign debt crisis 2011-12

% p.a., daily data



Sources: Bloomberg, Qontigo, and Bundesbank calculations. **1** Repo transactions on BrokerTec or MTS with German government bonds as collateral. **2** STOXX GC Pooling EUR ON index. **3** 13-day moving average.

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participants may strive to hedge themselves against falling securities prices. Building up uncovered short positions is one way of doing this. To this end, market participants usually borrow and sell securities in the repo market in order to buy them back at a later date at a cheaper price and reverse the repo transaction.[28] Market participants can make profits in this way if securities prices fall.[29]

Short positions not identifiable as the cause of sharp falls in the RepoFunds Rate

Data on short positions are not available for all potential market participants, meaning that it is not possible to carry out a full empirical review of this hypothesis. The volume of uncovered short sales can be derived using securities holdings statistics only for German banks. This reveals a considerable increase in short sales of German government bonds in 2010 and 2011, but these positions are also reduced again when repo rates fall – or when costs for holding short positions rise (see the chart on p. 25). The volume of uncovered short positions declined strongly in autumn 2008, too, when the (German) RepoFunds Rate hovered below the deposit facility rate. Therefore, the decline in the RepoFunds Rate during these phases is not likely to have been brought about by the rising volumes of uncovered short positions.[30]

Crisis-related increased liquidity supply as possible factor behind sharply falling RepoFunds Rate

Furthermore, a rise in counterparty risk in the banking sector ensures that investments in the unsecured money market become less attractive for risk-averse actors, in particular. They may favour investments in the repo market, which results in downward pressure on secured money market rates on account of the increased liquidity supply. This applies, above all, if transactions by actors without central bank access are significant for the money market rate.[31] The sharp downward movements in the GC rate for German government bonds traded on BrokerTec observed in both 2008 and 2011 are consistent with such a flight to safe-haven investments.[32] Since, for GC transactions on BrokerTec, as is the case for Eurex GC Pooling, the focus is usually on obtaining or investing liquidity, the rapid decline in interest rate conditions for GC transactions is indicative of an increased liquidity supply during these periods. This increased liquidity supply is likely to have stemmed, in particular, from market participants without central bank access, who, on account of the crisis, sought safe short-term financial investments.

28 Arbitrage on the pricing relationship between bonds and bond futures, for example, can cause similar shifts in supply and demand in the repo market. See Barth and Kahn (2020).
29 In the case of government bonds, short selling may potentially be attractive during crises particularly if there is an increase in government bond prices that is not caused by a general shift to safe-haven investments.
30 The securities holdings statistics data cannot provide comprehensive evidence since they are only available once per quarter for this period, cover only a small part of the total market, and only include uncovered short sales.
31 See European Central Bank (2012). A flight to safe-haven investments can have a similar effect if actors increasingly invest their liquidity in safe bonds or rebalance their portfolios towards these bonds and subsequently do not or only partially offer these in the repo market. The collateral supply available in the repo market falls, which, above all, can trigger downward pressure on those repo rates that include SC transactions.
32 See Ranaldo et al. (2019).

Differing composition of market participants requires differentiated response of money market rates, since …

The fact that the RepoFunds Rate fell more sharply than GC Pooling ON, which even rose in part in October 2008, is likely to be attributable to the differing composition of market participants. At that time, Eurex GC Pooling was used primarily by banks, which, especially in 2008, mostly wanted to obtain additional liquidity. The RepoFunds Rate, however, is likely to have included considerably more transactions involving market participants without central bank access, for whom safe liquidity investments may also be attractive if interest rates are below the deposit facility rate. Correspondingly, in cases of sharp rises in excess liquidity, the RepoFunds Rate is also likely to have fallen to a greater extent than GC Pooling ON because market activity saw a larger shift towards transactions between market participants with central bank access and those without central bank access.

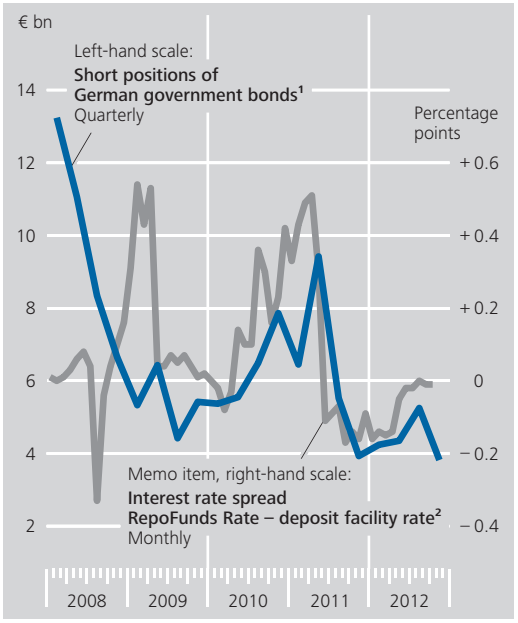
… market participants' money market activity depends on alternative investment options

The interaction between excess liquidity, interest rate conditions in the money market and the composition of money market participants can be illustrated for a later period of time using the central bank's balance sheet. Different interest rate conditions apply to government deposits and deposits of non-euro area residents (particularly foreign central banks) at the central bank. Government deposits had regularly been remunerated at the deposit facility rate since it became negative in 2014.[33] By contrast, for the deposits of non-euro area residents, the conditions of the ERMS apply. In this case, deposits above a customer-specific threshold are remunerated at an interest rate below the deposit facility rate (or can be invested in the money market for a small fee).

For public sector money market actors, the central bank's interest rate conditions are a crucial factor for money market activity

General government and foreign central banks used their central bank account in correspondingly different ways when the interest rates in the secured money market began to fall below the deposit facility rate in 2015. Government deposits already rose when the RepoFunds Rate stood below the deposit facility rate (see the chart on p. 26). From this point onwards, general government therefore increasingly chose the more favourable investment on its central bank account rather than investing its money at less favourable conditions in the money market. However, deposits stemming from non-euro area residents only began to increase at an accelerated pace during the course of 2016, when the RepoFunds Rate lowered the relevant credit balance remuneration below the deposit facility rate, and thus deposits at the central bank became more favourable than investments in the secured money market. In the same vein, deposits also declined again

Uncovered short positions during the financial and sovereign debt crisis



1 German banks' volume of uncovered short positions in German government bonds based on securities holdings statistics. **2** Difference between the German RepoFunds Rate (repo transactions on BrokerTec or MTS with German government bonds as collateral; source: Bloomberg) and the deposit facility rate.

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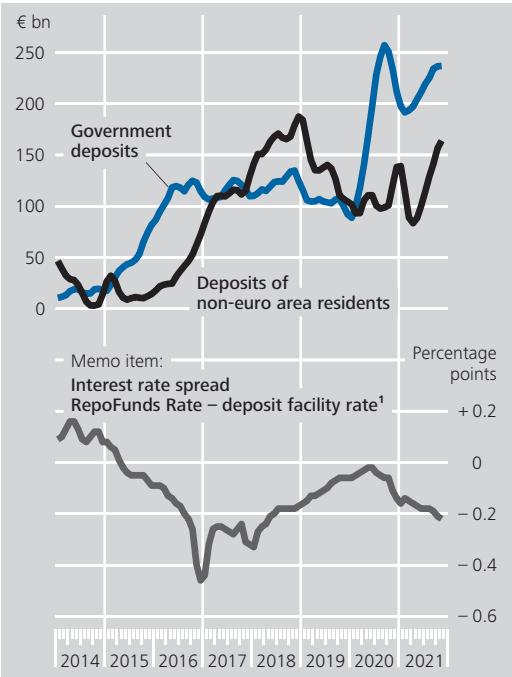
33 The deposit facility rate applies to government deposits above a threshold that corresponds to the higher amount of €200 million or 0.04% of national gross domestic product. When the interest rate on the deposit facility was positive, government deposits above the threshold were remunerated at 0%. Since the euro overnight index average rate (EONIA) was replaced by the euro short-term rate (€STR) as the unsecured reference rate on 3 January 2022, these deposits have been remunerated at €STR, provided it is below the deposit facility rate. See Guideline (EU) 2019/671 of the European Central Bank of 9 April 2019 on domestic asset and liability management operations by the national central banks (recast) (ECB/2019/7).

Credit balance of non-monetary policy counterparties at the Bundesbank

Three-month moving averages



1 Difference between the German RepoFunds Rate (repo transactions on BrokerTec or MTS with German government bonds as collateral; source: Bloomberg) and the deposit facility rate.

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when the RepoFunds Rate stood above this threshold once more in 2019.

From 2015 onwards, persistent interest rate spreads that were not brought about by a crisis

The episode beginning in 2015 that saw money market rates deviate markedly from the deposit facility rate coincided with a period in which strains on the banking system were not as pronounced as they had been in the preceding years. Counterparty risk played a smaller role and there was virtually no crisis-related demand for securities or short selling. Even so, during this episode, both the RepoFunds Rate and GC Pooling ON were observed to deviate persistently from the deposit facility rate over a long period of time (see the chart on p. 27). Both interest rates left the interest rate corridor, moving downwards. In this context, not only does the fact that the secured rates left the interest rate corridor require explanation, but so does the magnitude of the interest rate spread between these rates and the deposit facility rate. For the German RepoFunds Rate, the spread stood at around 29 basis points on average for 2017, while GC Pooling ON was just around 3 basis points below the deposit facility rate. Since 2021, too, interest rate spreads – considerable spreads in some cases – between these two rates and the deposit facility rate have been observed once more.

Monetary policy asset purchase programmes reduce collateral supply in the repo market

The persistent significant deviations of the RepoFunds Rate from the deposit facility rate are largely attributable to the Eurosystem's government bond purchases since 2015, which amounted to almost €500 billion in 2015 alone.[34] The bonds acquired by the Eurosystem were no longer directly available to market participants as collateral for repo transactions. This resulted in the ongoing purchases reducing the supply of bonds in the repo market. As a consequence, it became more expensive for market participants to obtain certain securities in the repo market.[35] This effect has since been amplified by the purchases being limited to bonds with yields above the deposit facility rate. In doing so, the Eurosystem focused its purchases, in part, on bonds with longer residual maturities, which were observed to generally exhibit lower repo rates as a result. Subsequently, the (German) RepoFunds Rate saw a considerable decline. The interest rate spread between the RepoFunds Rate and GC Pooling ON, which is fairly large at times, should therefore also be interpreted as an indicator of the relative scarcity of the bonds usable as collateral. Government bonds of other euro area Member States were less severely impacted by these effects, probably also owing to lower demand in the repo market relative to outstanding volume. The clearly declining repo rates impacted German banks as well. These effects are described in more detail in the box on p. 29.

34 By contrast, significant movements in the secured money market rates at year-end are more likely to be attributable to regulatory factors.

35 See Arrata et al. (2020) and Jank and Mönch (2018). Similar developments already occurred during the securities markets programme (SMP) in the context of the sovereign debt crisis (see Corradin and Maddaloni (2020)), when the Eurosystem did not offer any securities for lending, and during the asset purchase programmes in the United States (see D'Amico et al. (2015)).

Expanded securities lending led to decline in interest rate spreads for secured money market rates

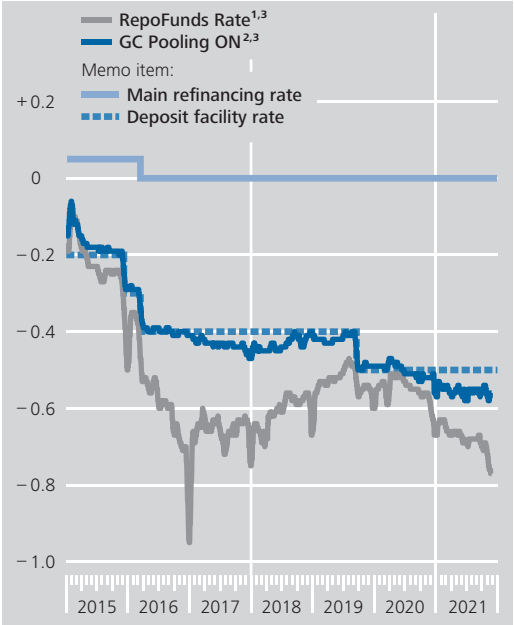
Towards the end of 2016, the interest rate spread between the RepoFunds Rate and the deposit facility rate reached its greatest extent. Changed conditions for purchase programmes and securities lending by the Eurosystem ultimately caused the interest rate spread to gradually narrow: from January 2017 on, the Eurosystem also acquired shorter-term government bonds with yields below the deposit facility rate. Consequently, the purchases were able to be distributed across a broader spectrum of maturities. In addition, the Eurosystem also accepted cash collateral for securities lending, within certain limits, as of December 2016.[36] On the one hand, this made securities lending more easily accessible, as a comparable security no longer needed to be provided as collateral in order to borrow a certain security. On the other hand, owing to the acceptance of cash collateral, the volume of scarce securities available to the market overall was expanded. As a consequence, increasing use was made of the Eurosystem's securities lending and the scarcity premiums in the repo market declined (see the chart on p. 28).[37] With the increase in asset purchases by the Eurosystem from March 2020 onwards, both the scarcity premiums and the use of securities lending picked up again. Following a change in the price conditions of securities lending in November 2020, the volumes can only be compared with earlier values to a limited extent.[38]

Decline in GC Pooling ON below deposit facility rate in line with interest rate developments for liquidity-driven money market transactions

GC Pooling ON also stood below the deposit facility rate between 2017 and 2019 and from 2020 onwards, but with a considerably narrower spread than the RepoFunds Rate. In the case of Eurex GC Pooling, the collateral is no longer usable for the collateral taker.[39] In addition, a significantly wider range of collateral – potentially with lower credit quality, too – can be used than for transactions included in the German RepoFunds Rate. A mere decrease in the holdings of German government bonds available to the repo market is therefore not a decisive factor behind the decline in GC Pooling ON below the deposit facility rate. One explanation is, however, provided by the very high excess liquidity in the banking system arising from various monetary policy measures and the associated lower demand for liquidity in the face of increased supply in the money market. As interbank transactions were barely

Secured money market rates during the Eurosystem's government bond purchases

% p.a., daily data



Sources: Bloomberg, Qontigo, and Bundesbank calculations. **1** Repo transactions on BrokerTec or MTS with German government bonds as collateral. **2** STOXX GC Pooling EUR ON index. **3** 13-day moving average.

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36 From September 2016 on, bilateral lending transactions against securities collateral were possible as well. Previously, the Bundesbank used only Clearstream Banking Luxembourg (CBL) platforms for securities lending: it has used Automated Securities Lending (ASL), which ensures that borrowers' trades do not fail, since April 2015, and ASLplus, where securities can be borrowed for purposes other than just avoiding settlement failures, since October 2015. The Bundesbank has also settled securities lending via the Eurex Repo trading platform since December 2020.
37 See also Jank and Mönch (2018).
38 The Eurosystem central banks are geared towards pricing that ensures that the Eurosystem's securities lending facilities serve as an effective backstop, i.e. they should support bond and repo market liquidity without excessively influencing usual market activity. The minimum fee for lending transactions against cash collateral was lowered in November 2020 from 30 basis points to 20 basis points below the deposit facility rate. The minimum interest rate spread for repo transactions against securities collateral was reduced from 10 basis points to 5 basis points. This caused the volume of borrowed securities to rise.
39 Except for the collateralisation of open market operations with the Bundesbank and within Eurex Repo.

The Bundesbank's bilateral securities lending to credit institutions from the euro area

Three-month moving averages

1 "Other liabilities to euro area credit institutions denominated in euro": Balance sheet item that primarily comprises the volume of securities acquired under the asset purchase programmes and lent to credit institutions in the euro area as part of the Bundesbank's bilateral securities lending. **2** Difference between the German RepoFunds Rate (repo transactions on BrokerTec or MTS with German government bonds as collateral; source: Bloomberg) and the deposit facility rate.

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needed any longer for short-term redistributions of liquidity, liquidity-driven money market transactions were primarily concluded by banks as liquidity takers and non-banks as liquidity providers. As many non-banks do not have any access to central bank accounts, interest rates in the unsecured money market also trade below the deposit facility rate, such as the overnight interest rate €STR, which is based on data from the money market statistics.[40] The moderate decline in GC Pooling ON below the deposit facility rate should therefore be seen as consistent with the general development of interest rate conditions for liquidity-driven transactions in the money market.

Summary and discussion

Considerable and persistent interest rate spreads between aggregate money market rates can materialise as a result of monetary policy framework conditions for the money market, but also due to determinants outside of monetary policy. Over the past few years, this has held especially true for the secured money market, as, alongside the composition of market participants and the supply of and demand for liquidity, securities-related effects can also play a role. The Eurosystem has exerted considerable influence on the availability of liquidity and securities through the high excess liquidity and its monetary policy asset purchase programmes (including the corresponding securities lending). Against this backdrop, setting the conditions for the monetary policy and non-monetary policy counterparties of the national central banks is a key determinant of the remuneration of secured money market transactions. Secured money market transactions are affected unevenly by these changes, depending on the choice of security, alternative investment options for counterparties, and trading venue. At times, secured money market rates that differ on account of these aspects thus also provide vastly different measurement results for the interest rate conditions in the secured money market.

This means that changes in certain interest rate spreads often do not reflect changes in the monetary policy stance. They can, however, be triggered indirectly by monetary policy, for example if asset purchases reduce the availability of securities for the repo market. Such indirect effects can, however, be limited by adjustments in the implementation of monetary policy, such as through securities lending. For this reason, an understanding of the conditions in the money market as a whole can only be obtained by looking at different money market rates simultaneously, taking into account the respective monetary policy context.

40 See also Deutsche Bundesbank (2020). The €STR has been published officially since October 2019. The Bundesbank has published data on earlier rates (pre-€STR) from March 2017 onwards, see https://www.bundesbank.de/de/statistiken/geld-und-kapitalmaerkte/zinssaetze-und-renditen/pre-str-daten-785158

The impact of collateral scarcity on bank lending

Interest rates on secured money market transactions with German government bonds have fallen significantly since 2015, and this has had two direct effects. For market participants looking to invest in these government bonds, it has become more expensive to borrow the securities in the secured money market. The holders of these government bonds, meanwhile, have been able to obtain funding in the secured money market at lower costs if they use the bonds as collateral. This box explains how these lower funding costs have impacted German banks and their lending.[1]

Since banks hold different bonds in their portfolios, the change in interest rates in the secured money market has not affected them all in the same way. This is because, as revealed by analyses of a dataset that merges money market statistics with securities holdings statistics, banks often use their existing bond portfolios as collateral when raising capital. At the same time, banks respond to changes in secured money market rates by borrowing more against collateral that allows them to do so at particularly low interest rates. The combined effect is that, depending on their securities portfolios, banks are affected differently by scarcity-induced interest rate fluctuations in the secured money market, which is likely to cause banks' funding costs to diverge.

In fact, data from the money market statistics can be used to show that banks holding relatively scarce bonds on their balance sheet have lower funding costs in the secured money market. At the same time, there is an increase in those banks' profits from secured money market transactions.

Assuming that these banks pass on the reduced funding costs to their customers in the form of lower lending rates, it is generally conceivable that they will also expand their lending. Using the Bundesbank's balance sheet statistics, it can be shown that a decline in the funding costs for a bank's securities portfolio does indeed lead to stronger credit growth, all other things being equal. The fact that this phenomenon is observable only for banks that were active in the secured repo market supports the hypothesis that the reduced funding costs probably did prompt the stronger credit growth.

This finding can also be obtained on the basis of data from the Bundesbank's credit register for loans of €1 million or more, in which credit growth can be traced at the individual borrower level. By comparing credit growth of the same borrower at banks with different levels of funding costs, one can rule out the possibility that the effect on credit growth is being driven by stronger credit demand.[2]

In addition, the Bundesbank's interest rate statistics also offer further insight into the transmission channel. The lending rates that a bank charges for short-term loans to enterprises correlate significantly with the funding costs of its securities portfolio, with the result that lower interest rates in the secured money market were accompanied by lower lending rates for short-term loans to enterprises at those banks that had holdings of scarce bonds. The lower lending rates, in turn, led to stronger growth in short-term loans to enterprises at banks that saw the funding costs for their securities portfolios decline.

Overall, the findings show that collateral scarcity in the repo market had an expansionary impact on credit growth at banks with holdings of these securities.

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1 See Tischer (2021).
2 See Khwaja and Mian (2008). If the credit growth were triggered by increased demand, a given borrower's credit growth would not be expected to differ systematically from one lender to the next because demand affects all lenders in equal measure. In that case, it would no longer be possible to identify any effect of funding costs on credit growth.

On the basis of the European treaties, the Eurosystem acts in accordance with market economy principles. It is therefore fundamentally not the task of the Eurosystem, alongside managing the general interest rate level, to also purposefully influence price formation in individual financial market segments. If interest rate spreads widen in the financial markets, then this is in principle welcome and an expression of functioning markets. In this context, the Eurosystem's securities lending does not have the function of managing interest rate conditions in the repo market, but instead merely mitigates the undesirable consequences of monetary policy asset purchase programmes for the repo market.

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Climate change and climate policy: analytical requirements and options from a central bank perspective

Ever since the start of the Industrial Revolution, the global average temperature has been increasing significantly. Most of this global warming is attributable to human activities. The effects of climate change on people and the environment are already being felt, and there is a risk of considerable damage in the long term. With that in mind, there is a broad consensus that appropriate measures need to be taken to combat climate change. Initiatives to this end are under way. Both climate change and climate policy will have far-reaching implications for macroeconomic developments, which is why central banks need to engage with this topic.

Alongside the macroeconomic effects of extreme weather events and gradually rising temperatures, attention is likely to turn to the impact of climate policy, in particular, in the near future. Measures such as significantly increasing the cost of greenhouse gas emissions are aimed at triggering far-reaching economic adjustment processes. This means that it is not only climate change itself but also climate policy that will affect different sectors to varying degrees. It stands to reason that certain regions, too, will be more heavily affected than others. These disparities could affect macroeconomic dynamics and monetary policy transmission. Climate change and climate policy may also give rise to risk concentrations that contribute to the build-up of systemic risk in the financial system and thus pose a potential threat to financial stability. The Bundesbank presented an initial analysis of the risks posed by climate action to the German financial system as part of its 2021 Financial Stability Review. Additionally, climate change and climate policy have a significant global dimension. All countries need to play their part in combating climate change. Action lacking sufficient coordination at the international level may result in distortions. All of this poses additional challenges to macroeconomic analysis, which is key to monetary policy and macroprudential decision-making. The Bundesbank is therefore adapting its analytical toolkit with the aim of being able to adequately study adjustment processes driven by climate change and climate policy, examining their sectoral and regional dimensions in an international context.

Relevance of climate change and climate policy for central banks

Global warming as a consequence of anthropogenic greenhouse gas emissions

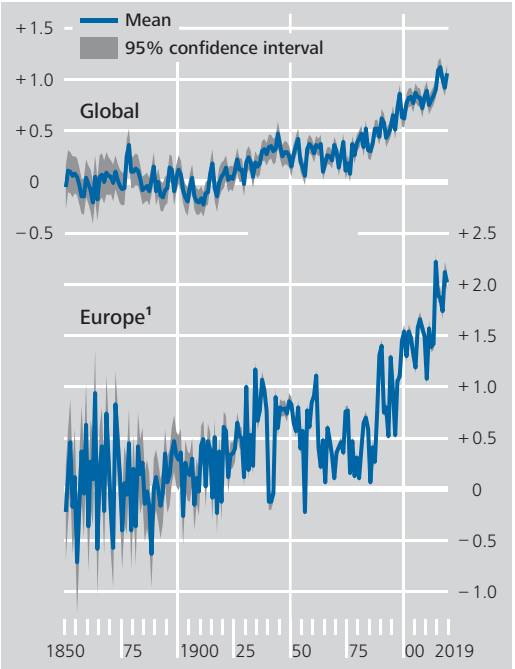
Ever since the start of the Industrial Revolution, the global average temperature has been rising significantly. It has been proven that most of this global warming is due to anthropogenic emissions of greenhouse gases.[1] There is also strong evidence to suggest that rising temperatures will spur further changes in the climate.[2]

Effects of climate change already being felt

Some of the effects triggered by global climate change are already being felt. These include the greater frequency and intensity of extreme weather events such as heat waves, dry spells and torrential rainfall.[3] Such effects are expected to be amplified as the climate continues to warm. Climate action is therefore one of the biggest challenges facing society today, and it is the task of governments and parliaments to set this in motion via climate policy.

Temperature anomaly*

°C



Sources: European Environment Agency, Met Office Hadley Centre and Climatic Research Unit. * Deviation of the annual average near-surface air temperature from the mean value for the years from 1850 to 1899. **1** Defined here as the land mass from 34°N to 72°N and −25°E to 45°E.

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Global dimension of climate problem

Particular political challenges arise from the global dimension of climate change and climate policy. Global efforts are required to combat climate change. This is why, on top of national initiatives, international agreements such as the Paris Agreement have a crucial role to play. In addition, the risk of irreversible climate change means there is greater urgency to act.[4]

Central banks, too, have to deal with climate change and climate policy

Central banks also have to deal with climate change and climate policy. Climate change and climate policy influence macroeconomic developments and may affect price and financial stability. This may make it more difficult for central banks to fulfil their tasks.[5]

Physical risks …

For example, physical risks such as rising average temperatures or more frequent extreme weather events may cause lasting harm to aggregate potential growth. Since the equilibrium real interest rate also depends on aggregate potential output, this would narrow the room for manoeuvre for conventional monetary policy measures. A lower equilibrium real interest rate increases the likelihood of monetary policy hitting the zero lower bound.[6] The consequences of climate change may also put pressure on the financial system and thereby make monetary policy transmission more difficult if, for example, extreme weather events are accompanied by substantial financial losses.

… and transition risks …

There are also transition risks associated with greening the economy. Measures such as significantly increasing the cost of greenhouse gas emissions are aimed at triggering far-reaching economic adjustment processes. This, too, may make it more difficult to safeguard price and financial stability if, for example, profound structural change triggers a widespread revalu-

1 See Intergovernmental Panel on Climate Change (2021).
2 See Intergovernmental Panel on Climate Change (2018).
3 See Intergovernmental Panel on Climate Change (2021).
4 The likelihood of irreversible climate change increases in line with average global warming. See Intergovernmental Panel on Climate Change (2021).
5 See also Deutsche Bundesbank (2021a).
6 See also Deutsche Bundesbank (2017a).

ation of assets.[7] Risks could also arise from changes in consumer behaviour brought on by the transition or from technological progress driven by climate policy.

… interact with one another

Physical and transition risks can be considered dynamic processes that interact with one another. These risks can be reduced in general by a forward-looking, predictable climate policy, whereas physical risks will mount in the face of climate policy inaction, with the threat of abrupt climate policy adjustments further down the line and ensuing transition risks.

Monetary policy analysis faced with new challenges

Climate change and climate policy therefore present monetary policy analysis with new challenges, too. Expectations or uncertainty about the occurrence and extent of climate damage as well as the future course of climate policy may influence economic activity.[8] Climate risks may also make it more difficult to identify economic drivers and prepare macroeconomic projections.[9]

In addition to global dimension, these include …

The global dimension of climate change and climate policy makes macroeconomic analysis particularly challenging. Looking at countries in isolation paints an incomplete picture of both the causes and the consequences of climate change.[10] The effects of climate action, too, are felt across national borders.

… regional and sectoral differences in importance of climate risks

The international distribution of physical and transition risks is also relevant to monetary policy because of its possible consequences, especially for a currency union such as the euro area. It is a similar story with respect to the accumulation of climate risks in certain sectors. Climate change and climate policy may give rise to risk concentrations that contribute to the build-up of systemic risk in the financial system and pose a potential threat to financial stability.[11]

Adjusting the analytical toolkit

Review of monetary policy analytical toolkit

To meet these challenges, it is necessary to review and, where necessary, adjust the monetary policy analytical toolkit. This is also true of macroeconomic analysis, which is key to monetary policy decision-making. Following the Eurosystem's latest monetary policy strategy review, the ECB therefore announced that it would expand its analytical capacity in macroeconomic modelling with regard to climate change and climate policy.[12]

Macroeconomic climate models: modelling interactions between climate and economic activity …

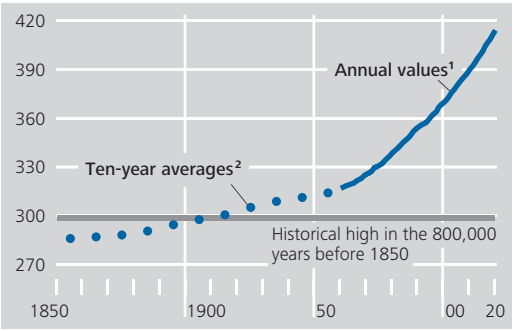
This includes, inter alia, incorporating macroeconomic climate models, known as integrated assessment models (IAMs). The combination of model elements from economics and climate research is characteristic of this model class. The idea behind this is to capture the interdependence of climate and economic activity in a relatively simple way.[13] In an IAM, it is usually assumed that greenhouse gases are emitted in the course of economic activity. This subsequently leads to an increase in the global average temperature, which in turn has an impact on economic activity. This can be represented, for example, by a functional relationship between the average global temperature and output: the damage function.

… as well as climate policy

On the basis of such models, costs and benefits can be weighed against each other to determine optimal emission pathways and thus consistent climate action.[14] Alternatively, a climate policy goal can be specified directly, for example in the form of a global average temperature or a cap on greenhouse gas emissions. The agents in the model then make their decisions subject to this constraint.

7 See, inter alia, Deutsche Bundesbank (2021b).
8 See, inter alia, Deutsche Bundesbank (2018).
9 See Drudi et al. (2021).
10 See also Hsiang and Kopp (2018).
11 See Deutsche Bundesbank (2021b).
12 See European Central Bank (2021).
13 See, inter alia, Nordhaus (2013) and Hassler et al. (2016).
14 See, inter alia, Weitzmann (2012) and Nordhaus (2013).

Atmospheric CO_2 concentration since 1850*



Sources: National Oceanic and Atmospheric Administration, Bereiter et al. (2015) and Bundesbank calculations. **1** Data from 1960 onwards are from the Hawaiian Mauna Loa atmospheric baseline observatory. **2** Reconstruction of atmospheric CO_2 concentration before 1960 based on studies of ice cores.
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Deployment and adjustment of conventional analytical toolkit

However, the macroeconomic effects of climate change and climate policy can also be examined using modelling approaches that more closely resemble the macroeconomic analysis traditionally conducted by central banks. For example, established econometric methods can be used to estimate the macroeconomic impact of climate change.[15] In addition, structural macroeconomic models, such as dynamic stochastic general equilibrium (DSGE) models,[16] can be modified in such a way that they can be used to investigate the consequences of extreme weather and the effects of climate policy.[17] Using models of this kind, macroeconomic adjustment processes can be examined in more detail than is possible with macroeconomic climate models. The environmental multi-sector DSGE model EMuSe, which was developed at the Bundesbank, can be used in particular to analyse adjustment processes driven by climate policy in an international context and flexibly adapted to various policy questions (see the box on pp. 50 ff.).[18]

Macroeconomic effects of climate change

Greenhouse effect amplified by use of fossil fuels

The concentration of greenhouse gases in the atmosphere has been rising steadily for around 200 years.[19] This trend, which is due largely to the use of fossil fuels, is amplifying the natural greenhouse effect. In Earth's atmosphere, the balance between incoming and outgoing solar radiation is changing in such a way that net solar radiation is increasing.[20] Climate projections show that, in the absence of climate policy intervention, this trend will continue.[21] However, there is still uncertainty as to how much the heightened concentration of greenhouse gases in the atmosphere will affect the global average temperature.[22] The expected regional distribution of temperature changes is especially fraught with uncertainty. In addition to rising global temperatures, climate change is accompanied by a host of other effects, some varying quite widely from region to region. These include rising sea levels, changing precipitation patterns and more frequent and more extreme weather events.[23]

Climate change as a trigger for adjustment processes

It is already clear today that climate change will bring irreversible changes in its wake.[24] In addition to the direct effects, this will result in further adjustment processes. Both the direct consequences and the adjustment processes that they trigger will affect the economy as a whole.

15 See, inter alia, Dell et al. (2014), Burke et al. (2015) and Gallic and Vermandel (2020).
16 A characteristic feature of this model class is the approach of explaining macroeconomic relationships and developments based on the individual optimal decisions of (typically) rational economic agents. This model framework is presented in detail, inter alia, in Christiano et al. (2018).
17 See, inter alia, Gallic and Vermandel (2020), Heutel (2012) and Golosov et al. (2014).
18 A detailed description of the environmental multi-sector DSGE model EMuSe can be found in Hinterlang et al. (2021).
19 For example, the CO_2 concentration in Earth's atmosphere is almost 1.5 times higher than it was in pre-industrial times. The concentration of methane in the atmosphere saw an even larger increase in the same period, to more than 2.5 times the pre-industrial level. See Intergovernmental Panel on Climate Change (2021).
20 See North (2015).
21 See, inter alia, Intergovernmental Panel on Climate Change (2021) and Network of Central Banks and Supervisors for Greening the Financial System (2021a).
22 This uncertainty is reflected in the range of temperature increases to be expected as a result of the rising concentration of greenhouse gases, which was calculated using various climate science methods. See Intergovernmental Panel on Climate Change (2021).
23 See Intergovernmental Panel on Climate Change (2014).
24 See Intergovernmental Panel on Climate Change (2021).

Gradual temperature increase

Impact of gradual warming on labour input, productivity …

The gradual increase in average temperatures affects economic activity in a variety of ways, with the impact depending on the initial temperature. Human health and performance suffer at high temperatures.[25] As a result, when certain temperature thresholds are exceeded, it is not just productivity but also labour input that decreases.[26] Climate-related migration can also have repercussions for employment.[27] Where initial temperatures are low, however, a temperature increase could have a positive effect on labour input and productivity.[28]

… as well as natural …

The increase in average temperatures also affects the production factor capital. A distinction should be made between different types of capital. On the one hand, a lasting impact on natural capital is foreseeable. For example, increasing water scarcity may affect output in certain regions.[29] By contrast, some countries would stand to benefit temporarily from a temperature rise, since the production conditions for certain goods, such as those in agriculture, would improve.[30]

… and physical capital

On the other hand, gradual warming may have consequences for the physical capital stock. For example, infrastructure and production facilities could conceivably be damaged or age faster as a result of increased temperatures.[31] Indirect effects stem from the need to adjust the capital stock to evolving environmental conditions or from changes in investment behaviour.[32] This is detrimental if, on account of climate considerations, it comes at the expense of more productive investment alternatives and the efficiency gains that they would have brought with them have to be sacrificed.[33] A downturn in investor sentiment triggered by climate change – for example, as a result of increased uncertainty or more pessimistic expectations about the future – may even dampen the general propensity to invest, with far-reaching consequences for growth and prosperity.[34]

Effect of gradual warming on demand

A temperature increase can also have economic effects via structural changes in demand. Economic agents' preferences could conceivably change as a result of improved information about the long-term impact of consumption and investment decisions on the climate.[35]

Direction and intensity of effect of gradual temperature increase dependent on a variety of factors

The effects described here may vary significantly across regions, economic sectors and periods under consideration. For example, the adverse effects of temperature increases will be particularly evident in regions that are already hot.[36] When certain thresholds, or climatic tipping points,[37] are reached, the effects on the economy as a whole can sometimes be devastating.[38] From a sectoral perspective, there is strong evidence of adverse implications for agriculture, in particular.[39] However, there are signs pointing to output losses in manufactur-

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25 Temperature-related productivity losses are identified in panel analyses (see Hsiang (2010) for Central and South America and Colacito et al. (2018) and Deryugina and Hsiang (2014) for the United States) and in experimental studies (see Seppänen et al. (2005)). Regarding the health consequences of rising temperatures, see, inter alia, Vicedo-Cabrera et al. (2021).
26 See Graff Zivin and Neidell (2014) and Hsiang et al. (2017) for the United States, Hsiang (2010) for Central and South America, Somanathan et al. (2021) for India and Burke et al. (2015) for a global panel.
27 See, inter alia, Black et al. (2011), Oppenheimer (2013) and Missirian and Schlenker (2017).
28 See also Tol (2018).
29 See, inter alia, World Bank (2016) and Dolan et al. (2021).
30 See, inter alia, Burke et al. (2015) and Tol (2018).
31 See, inter alia, Dietz and Stern (2015).
32 See, inter alia, Fankhauser et al. (1999), Batten (2018) and Andersson et al. (2020).
33 See, inter alia, Stern (2013) and Moyer et al. (2014).
34 Diminishing investment in research and development can also put the brakes on technological progress. See, inter alia, Dietz and Stern (2015) and Letta and Tol (2019).
35 See, inter alia, Moran et al. (2020) and Reisch et al. (2021).
36 See Dell et al. (2012) and Burke et al. (2015).
37 Tipping points refer to critical thresholds in a system that, when exceeded, can lead to a significant change in the state of the system, often with an understanding that the change is irreversible. See Intergovernmental Panel on Climate Change (2018).
38 See Burke et al. (2015), Intergovernmental Panel on Climate Change (2018) and the box on pp. 39 ff.
39 See, inter alia, Deschênes and Greenstone (2007), Schlenker and Roberts (2009), Fisher et al. (2012), Graff Zivin and Neidell (2014), Burke and Emerick (2016), Colacito et al. (2018) and Acevedo et al. (2020) for the United States and Lesk et al. (2016) and Burke et al. (2015) for a global country panel.

ing and certain services sectors, too.[40] In addition, it must be borne in mind that the macroeconomic impact at the sectoral or local level is also associated with spillover effects resulting from economic and financial linkages.

Empirical findings show non-linear relationship between temperature and economic growth

The macroeconomic importance of temperature changes very much depends on whether their effects are permanent.[41] A number of empirical studies indicate that changes in the average temperature affect aggregate growth, with evidence of non-linear relationships.[42] Bundesbank estimations for a panel of European countries come to a similar conclusion (for details, see the box on pp. 39 ff.). According to these results, an increase in the annual average temperature dampens economic growth when a certain threshold is exceeded. The estimated threshold for the annual average temperature is just over 9°C.

In Europe, effects vary widely from region to region

Based on the estimations, the effects of the gradual warming observed in recent decades have varied widely across Europe. While this warming seems to have boosted economic developments in some northern European countries so far because of their lower initial temperatures, the opposite was the case for a number of southern countries. It also follows from the estimations that a progressive temperature increase would adversely affect macroeconomic developments in Europe in the long term, with considerable growth differentials sometimes emerging, even amongst euro area economies.[43] Compared with other world regions, however, the loss in output growth in Europe would be rather small (see also the box on pp. 43 f.).[44]

Estimates of climate-related output losses fraught with considerable uncertainty

Estimates of this kind are fraught with considerable uncertainty. First, there is a fundamental degree of estimation and specification uncertainty. For example, international interdependencies are not adequately taken into account in the approach adopted here, but they can be significant. Second, it should be noted that the estimations reflect historical developments. Any statements they lead to regarding the future must come with a caveat. They would need adjusting if there were significant technological advances that had an impact on the climate or if climatic tipping points became relevant, for example.

Results correspond to findings of macroeconomic climate models, …

Nevertheless, the findings described above correspond to projections of macroeconomic climate models. According to IAM simulations, too, labour productivity in Europe would suffer as a result of progressive warming. However, losses would be significantly lower than in other regions of the world.[45] Within Europe, damage in the south would be significantly greater in the long term than in the centre or north of the continent.

… although there is model uncertainty here, too

However, IAM simulations are likewise subject to significant model uncertainty, particularly in terms of the specification of the damage function. Depending on the assumed functional relationship and the parametrisation, there can be major differences in terms of probable economic losses.[46,47]

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40 Output losses in certain services sectors are identified by Hsiang (2010) for Central and South American countries and by Colacito et al. (2018) for the United States. Effects on output in manufacturing or industry are shown by Acevedo et al. (2020) for the United States, Deschênes et al. (2018) for firms in China and Dell et al. (2012) in a global panel. Burke et al. (2015) document non-linear effects for the agricultural and non-agricultural sector.
41 See Fankhauser and Tol (2005), Stern (2013), Tol (2018) and Piontek et al. (2019).
42 See, inter alia, Dell et al. (2012), Dell et al. (2014) and Burke et al. (2015).
43 For example, the projected cumulative damage is many times higher for Spain and Portugal than for Germany.
44 Burke et al. (2015) even derive positive macroeconomic effects of a progressive rise in temperature for Europe from an estimation using global data.
45 IAM projections on the impact of climate change on labour productivity can be accessed via the NGFS CA Climate Impact Explorer: http://climate-impact-explorer.climateanalytics.org/. See also Network of Central Banks and Supervisors for Greening the Financial System (2021a).
46 In addition, the assessment of future damage can depend to a large extent on other factors, such as the social discount rate. See also Bauer and Rudebusch (2021).
47 The damage functions in macroeconomic climate models are therefore a contentious topic. See, inter alia, Weitzmann (2012) and Pindyck (2013).

The impact of changing temperatures on macroeconomic developments in Europe

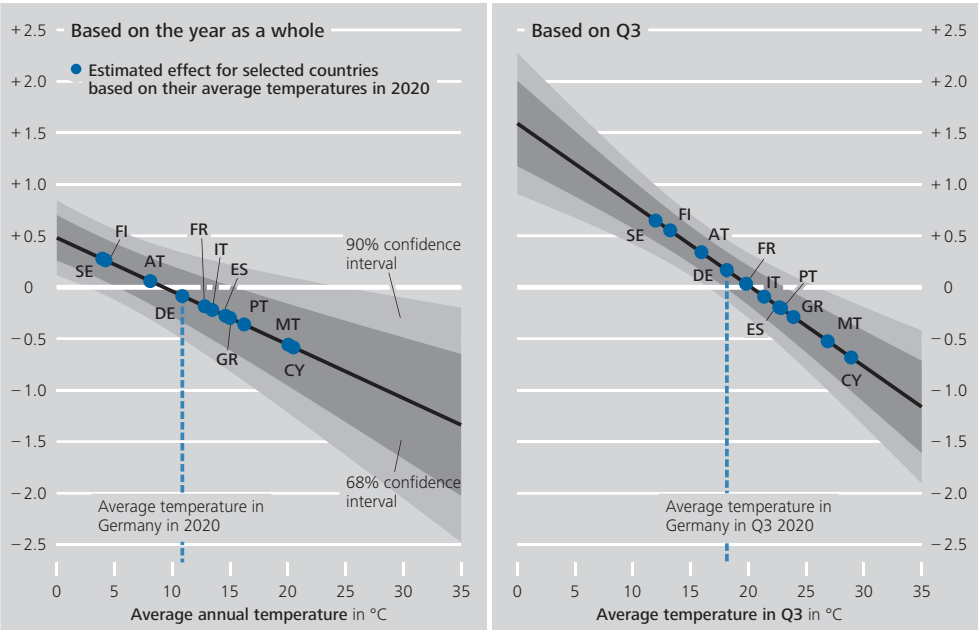
Over the last few decades, average temperatures in Europe have increased markedly. This global warming impacts upon economic activity in various ways. International studies show that high temperatures lead to reduced working hours and lower labour productivity.[1] Barely any studies of this nature have been conducted for Europe.[2]

Panel regressions provide a means of studying the impact of changing temperatures on economic growth. The growth rate of gross domestic product (GDP) in year t in country i ($\Delta y_{i,t}$) is regressed on the respective average annual temperature ($T_{i,t}$).[3] Based on relevant studies, it is assumed that temperature changes themselves are not influenced by economic growth.[4] The model also incorporates the average precipitation ($R_{i,t}$) and lagged values of the GDP growth rate ($\Delta y_{i,t-1}$), country fixed (a_i) and year fixed effects (a_t) and a residual: ($\varepsilon_{i,t}$):[5]

1 See, inter alia, Hsiang (2010), Dell et al. (2014), Graff Zivin and Neidell (2014), Deryugina and Hsiang (2014), Burke et al. (2015) and Colacito et al. (2018).
2 One exception is Holtermann and Rische (2020), which focuses on the relationship between regional growth and temperatures in the European Nomenclature of Territorial Units for Statistics (NUTS)-classified regions of the EU15 countries.
3 The model is based on earlier studies of the global impact of rising temperatures; see Burke et al. (2015) and Dell et al. (2012).
4 See Auffhammer et al. (2013).
5 In view of the strong correlation between precipitation and temperature data, it seems appropriate to include both variables (see Auffhammer et al. (2013)). The country fixed effects control for time-invariant differences between the growth rates, while year fixed effects capture joint trend movements and year-specific one-off effects. The estimated temperature effect is thus derived from country-specific deviations in the GDP growth rate and in the average annual temperature from the European average (see Burke et al. (2015)).

Change in GDP growth for selected initial temperatures given a 1°C rise in the average temperature*

Percentage points



Sources: World Bank, CRU TS climate dataset and Bundesbank calculations. * The effects were estimated using a panel approach. The dataset underlying the estimation consists of data from the Member States of the European Union, Albania, Bosnia and Herzegovina, Iceland, Montenegro, Norway, Serbia, Switzerland and the United Kingdom from 1961 to 2020.

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Estimated impact of the temperature increase between 1960 and 2020 on growth in gross domestic product

Countries	Average temperature in 1960 (°C)	Average temperature in 2020 (°C)	Increase (°C)[1]	Average increase per year (°C)	Estimated cumulative effect on GDP growth (percentage points)[2]	68% confidence interval	
Malta	18.95	20.04	1.09	0.02	– 0.89	– 1.55	– 0.24
Cyprus	19.60	20.48	0.88	0.01	– 0.72	– 1.23	– 0.21
Portugal	14.74	16.22	1.48	0.02	– 0.69	– 1.37	0.00
Spain	12.95	14.60	1.65	0.03	– 0.57	– 1.30	0.15
Italy	11.98	13.46	1.48	0.02	– 0.43	– 1.09	0.23
France	10.74	12.80	2.06	0.03	– 0.39	– 1.20	0.42
Greece	14.28	14.99	0.71	0.01	– 0.33	– 0.69	0.03
Belgium	9.73	11.93	2.20	0.04	– 0.25	– 1.06	0.56
Netherlands	9.55	11.61	2.06	0.03	– 0.20	– 0.95	0.56
Germany	8.61	10.87	2.26	0.04	– 0.08	– 0.90	0.75
Ireland	9.22	9.73	0.52	0.01	– 0.01	– 0.21	0.19
Austria	6.11	8.09	1.98	0.03	0.36	– 0.34	1.06
Finland	1.64	4.21	2.57	0.04	1.10	0.42	1.78

Sources: CRU TS climate dataset and Bundesbank calculations. **1** Increase in the average annual temperature between 1960 and 2020. **2** Estimated effect on the annual GDP growth rate in 2020 that can be attributed to the change in the average annual temperature between 1960 and 2020. The calculations are based on the effect of a temperature increase on annual GDP growth estimated in a panel model. The dataset underlying the estimation consists of data from the Member States of the European Union, Albania, Bosnia and Herzegovina, Iceland, Montenegro, Norway, Serbia, Switzerland and the United Kingdom from 1961 to 2020.

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$$\Delta y_{i,t} = \rho \Delta y_{i,t-1} + \beta_1 T_{i,t} + \beta_2 T_{i,t}^2 + \gamma_1 R_{i,t} + \gamma_2 R_{i,t}^2 + a_i + a_t + \varepsilon_{i,t}.$$

Here, the quadratic terms allow non-linear relationships to be captured.[6] Data for 35 European countries (all 27 EU Member States as well as Albania, Bosnia and Herzegovina, Iceland, Montenegro, Norway, Serbia, Switzerland and the United Kingdom) for the period from 1961 to 2020 are included in the estimation.[7]

The regression results for the group of countries under review indicate that the average annual temperature has a marked impact on economic growth. The linear effect ($\beta_1 = 0.48$) and quadratic effect ($\beta_2 = -0.03$) of the average temperature both show a statistically significant difference from zero at the 95% confidence level. The negative quadratic effect implies that the effect of a rise in temperature is dependent on the initial temperature. Starting from a low temperature, a rise in temperature is beneficial; starting from a high temperature, it has adverse effects. The threshold differentiating low temperatures from high temperatures is 9.3°C.[8] Furthermore, the greater the gap between the initial temperature and the threshold value, the stronger the estimated impact of temperature on GDP.

More in-depth analyses show that the established temperature effect is essentially driven by the summer months. When the annual GDP growth rate is regressed on the

6 Statistical tests, too, favour a quadratic relationship between GDP growth rates and the average temperature over a linear relationship. A quadratic relationship is also supported in international studies (see Burke et al. (2015)).

7 Temperature and precipitation data are taken from the Climatic Research Unit of the University of East Anglia, which aggregates the data from individual weather stations at the country level using geographical distance weighting. The time series can be downloaded from the World Bank's Climate Change Knowledge Portal. For the analyses, the monthly temperatures were consolidated as an annual or quarterly average. The GDP growth rates are taken from the World Bank's World Development Indicators. The model is estimated on the basis of an unbalanced panel dataset (for more information, see, inter alia, Cameron and Trivedi (2005)).

8 The results are in line with the findings of related studies. A negative effect on GDP growth is produced in a global panel given an average annual temperature of 13°C or above (Burke et al. (2015)) or 9.2°C or above for regional growth rates in the EU15 (Holtermann and Rische (2020)).

average temperatures and precipitation for the four quarters of the year (rather than the annual average), a statistically significant relationship is only seen for the summer quarter.[9] In addition, the estimated effect is significantly stronger than the impact of the average temperature in terms of the year as a whole. This suggests that temperature increases during the other quarters of the year tend to counteract the growth-inhibiting effect of the hotter summer months.[10]

These estimation results indicate that the temperature increase has had a very varied impact on economic growth in the individual European countries to date. Between 1960 and 2020, the average rise in temperature in the European countries each year was between 0.01°C and 0.04°C. Using the estimated coefficients, the average growth effect for each country can be calculated from this.[11] While northern European countries appear to have benefited from the rising temperatures, adverse effects are found in parts of southern Europe.[12] In Finland, the annual GDP growth rate is likely to have risen by around 1.1 percentage points between 1960 and 2020 on account of the temperature effect, according to the estimates. In Cyprus or Malta, by contrast, it probably decreased by between 0.7 and 0.9 percentage point. No statistically significant effects can be seen for western and central Europe, as the average temperatures in these countries were close to the threshold value of 9.3°C during this period. Around this mark, the macroeconomic impact of a rise in temperature is either zero or very slight.

When interpreting these results, it should be borne in mind that estimation uncertainty is high, due in part to sharply fluctuating average annual temperatures over time, in some cases. Furthermore, only historical relationships were analysed, and not all economic effects of climate change were systemically captured. This applies to the impact of extreme weather events,[13] for example, and the spillover effects of climate change in other regions of the world. Moreover, it should be noted that the impact of further rises in temperature may differ from historical relationships. For instance, the macroeconomic costs after passing a climatic tipping point could be significantly higher.[14] Adapting to climate change – say, by means of technical innovations – could, on the other hand, reduce the adverse impact on economic growth.[15] These considerations aside, however, the estimates provide clear indications that a further rise in temperatures would likely weaken economic growth in Europe and create a growth divide.

9 Similar results emerge for the United States and Central America (see Hsiang (2010) and Colacito et al. (2018)).

10 A decline in the number of icy days in the winter quarters, for instance, can have a positive impact on GDP (see Deutsche Bundesbank (2014) and Bloesch and Gourio (2015)). In the cold northern European countries, more in-depth studies identify a rise in temperature in winter and spring as having a positive effect on GDP growth.

11 Here, the aggregate impact is $\sum_{s=1961}^{2020} \rho^{2020-s}[\beta_1(T_{i,s} - T_{i,1960}) + \beta_2(T_{i,s}^2 - T_{i,1960}^2)]$. The confidence bands are calculated using the delta method.

12 Macroeconomic climate models also identify varying effects in the EU countries (see European Commission (2018)).

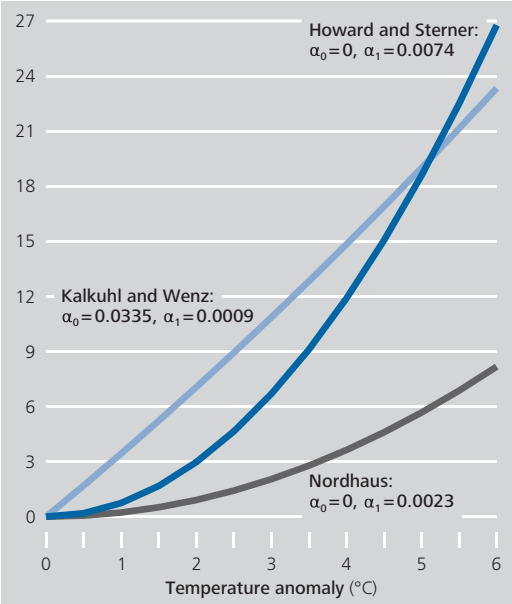
13 For information on the impact of extreme weather events, see, inter alia, Hsiang and Narita (2012), Lesk et al. (2016) and Deutsche Bundesbank (2017b).

14 Tipping points refer to critical thresholds in a system that, when exceeded, can lead to a significant change in the state of the system, often with an understanding that the change is irreversible. See Intergovernmental Panel on Climate Change (2018).

15 Historically, however, such adaptation has not yet had an impact on the relationship between temperature changes and GDP growth, according to international studies (see Burke et al. (2015)).

Estimated global GDP losses caused by rising temperatures for selected damage functions*

As a percentage of GDP



Source: Bundesbank calculations based on Howard and Sterner (2017), Nordhaus (2017) and Kalkuhl and Wenz (2020). * Assumes a quadratic relationship between the global temperature anomaly τ and physical damage $D(\tau)$: $D(\tau)=\alpha_0\tau+\alpha_1\tau^2$, in which α_0 and α_1 are estimated parameters.

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Extreme weather events

Extreme weather events as …

There is mounting evidence of a link between climate change and the frequency, intensity and concurrence of weather extremes such as storms, floods and droughts.[48] Extreme weather conditions of this kind can bring about disruptions to supply and demand that are both significant in macroeconomic terms and hard to predict,[49] and which also vary across regions and across sectors.[50]

… supply-side …

Such extreme weather events have a direct impact on humans and physical capital in the regions affected.[51] There can also be indirect effects that – at least temporarily – influence economic output outside the disaster-hit regions, for example if supply chains are disrupted or migratory movements are triggered.[52]

… and demand-side disturbances

The demand side, too, can be affected by the indirect consequences of extreme weather phenomena. When households and firms (particularly banks and insurers) experience any kind of asset losses or increased need for write-downs, it acts as a potential damper on consumption and investment demand.[53] But individual regions or sectors may also see boosts to demand, for instance when requests for goods or services that at least for a time cannot be produced in the disaster-hit area are serviced elsewhere. Furthermore, individual sectors may profit from work to tackle the damage caused and to rebuild.[54] Overall, however, sudden extreme weather events are likely to mean economic losses, at least in the short term.[55]

Empirical evidence of weather extremes bringing macroeconomic strain, especially in the short and medium term

The more frequent occurrence of extreme weather conditions is likely to make aggregate output and prices more volatile.[56] Moreover, a sufficiently strong or abrupt fall in asset prices has the potential to pose a threat to financial stability.[57] Potential output may also be affected, although the direction of the effect is ambiguous theoretically. On the one hand, extreme weather events could conceivably wreak lasting damage on natural or physical capital stock, thereby weakening aggregate growth. Potential output could also suffer if private and public investment are cut, for instance due to elevated uncertainty or fiscal burdens.[58] Furthermore, climate-related adjustment measures might conceivably tie up resources – to the detriment of more productive alternative invest-

48 See, inter alia, Böhnisch et al. (2021), Intergovernmental Panel on Climate Change (2021) and Kuhla et al. (2021).
49 See, inter alia, Cavallo and Noy (2011) and Dell et al. (2014).
50 See also Jahn (2015).
51 See, inter alia, Kahn (2005), Keen and Pakko (2011), Anttila-Hughes and Hsiang (2013) and Batten (2018).
52 See, inter alia, Cavallo and Noy (2011), Strobl (2011) and Ghadge et al. (2020).
53 See, inter alia, Fankhauser and Tol (2005) and Bernstein et al. (2019).
54 See, inter alia, Hsiang (2010).
55 This has been shown in a host of empirical studies. See, inter alia, Cavallo and Noy (2011) and Botzen et al. (2019).
56 For example, simulations on the basis of DSGE models show that an increase in the distribution of unexpected extreme weather events can significantly influence the volatility of key macroeconomic variables. See Gallic and Vermandel (2020).
57 See also Deutsche Bundesbank (2021b).
58 See Deutsche Bundesbank (2018) and Deryugina (2017).

Impact of the gradual rise in temperature on trend growth in the German economy

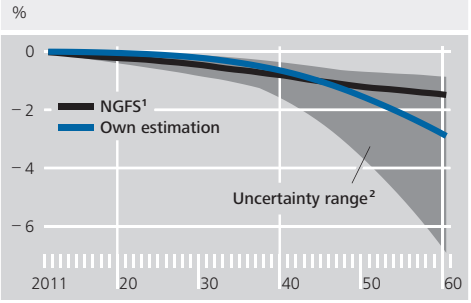
The anticipated gradual rise in temperature raises the question as to what impact this will have on trend growth in the German economy if swift, sustainable action is not taken. The macroeconomic consequences of global warming can be assessed using the scenarios developed by the Network of Central Banks and Supervisors for Greening the Financial System (NGFS).[1] They forecast country-specific developments in average temperature and gross domestic product (GDP) for various emissions pathways.[2] Damage functions are used to establish the relationship between developments in the temperature and in GDP.[3]

The damage function in the NGFS scenarios is calibrated based on the estimation results of the interplay between these two variables in the past. The values for the calibration are taken from Kalkuhl and Wenz's global panel study (2020).[4] According to the estimation results used in the NGFS scenarios, a one-off change in temperature has a level effect on productivity.[5] However, if the average annual temperature rises continuously, the GDP growth rate is lower than the level it would be without the rise in temperature. According to these scenarios, the temperature rise expected in Germany over the course of the current decade would result in only low GDP losses.[6] As of 2030, however, if climate change continues unabated, the impact is likely to be stronger.

These estimates are subject to high uncertainty for various reasons. First, the extent of the rise in temperature for a predefined emissions pathway can only be approximated. This is why the NGFS provides GDP damage for various percentiles of potential temperature development. The median for GDP losses in Germany in 2100 is 2½%. This figure amounts to just over 5% at the 95th percentile. Second, the relationship between average temperature and GDP is unclear. As an alternative to the NGFS damage function, it is also possible to use estimation results that document a correlation between temperature levels and GDP growth rates in European countries (for

1 See Network of Central Banks and Supervisors for Greening the Financial System (2021b). The results obtained come from an international climate research consortium. Members include the Potsdam Institute for Climate Impact Research (PIK), the International Institute for Applied Systems Analysis (IIASA), the University of Maryland (UMD), Climate Analytics (CA) and the Eidgenössische Technische Hochschule in Zurich (ETH Zurich).
2 For more details on the methodology behind the scenarios and the models used, see Network of Central Banks and Supervisors for Greening the Financial System (2021c). The results presented here are based on the IAM results of the PIK's REMIND model, broken down by country.
3 The construction of the scenarios does not reflect damage that indirectly affects an economy's performance, such as changes to mortality or to the frequency of violent conflict, or damage to biodiversity and the ecosystem. The REMIND IAM can also take account of feedback loops and dynamic effects which lead to adaptations in capital accumulation or savings, or trigger policy responses to prevent emissions. However, such effects do not have a strong bearing on the size of climate costs in the NGFS calculations.
4 The dependent productivity variable in these calculations comprises labour and agricultural productivity as well as capital depreciation.
5 The impact of the temperature level on growth of per capita GDP is statistically insignificant in the estimations. The estimation equation factors in potential non-linearities in the correlation between temperature rise and GDP growth. The results demonstrate that a rise in temperature is driving economic growth in regions that were originally colder and slowing economic growth in areas that are already warmer. This is in line with the findings of other studies.
6 The NGFS' "Current Policies" scenario, which takes into consideration only containment measures that have already been implemented, is used for the scenario of unabated climate change. A hypothetical reference scenario without climate effects is used to calculate the costs of global warming. The GDP pathway in this scenario corresponds to trend growth over the past few decades, which is adjusted for the impact of the coronavirus pandemic using projections made by the International Monetary Fund (2020).

GDP level effects of the gradual rise in temperature in Germany



Sources: NGFS, Potsdam Institute for Climate Impact Research and Bundesbank calculations. **1** Damage function according to Kalkuhl and Wenz (2020). **2** Combination of overlapping uncertainty intervals according to Kalkuhl and Wenz (2020) and own estimation. The underlying developments in GDP and temperature are based on the "Current Policies" scenario in the REMIND integrated assessment model according to NGFS data.

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more details on this, see the box on pp. 39 ff.). According to this alternative method, the rise in temperature lastingly dampens economic growth. In this case, climate change would have a stronger impact on German GDP over the longer term.

In addition, it is important to note that the NGFS scenarios do not model climate damage as a result of more frequent extreme weather events or of tipping points. Yet, as global warming intensifies, these will become more likely and entail considerable macroeconomic consequences. Another factor to be considered is the impact of cross-border trade and migration links which might cause climate-related GDP losses in other countries to spill over into Germany.[7] Moreover, the comparatively small GDP losses in Germany should not blind observers to the fact that massive global GDP damage is expected.[8]

The NGFS calculations also indicate the extent to which macroeconomic damage can be limited by climate policy measures. In the scenario calculations, measures to reduce emissions that are introduced early and are intensified evenly over time (shown in the orderly NGFS scenarios) can considerably reduce both the costs of intervention as well as the costs arising as a result of global warming. If global greenhouse gas neutrality can be achieved in this way by 2050 and global warming can thereby be limited to 1.5°C, the GDP losses expected as a result of the gradual rise in temperature could be limited to 0.6% in 2100 instead of 2.7%. Even if global warming can only be capped at just under 2°C, climate-related GDP losses in Germany will still be significantly lower at 0.8%. If only those national contributions to climate protection pledged at present are implemented, the average temperature is likely to rise by about 2.5°C and GDP losses will be perceptibly greater, estimated at 1.6%. These scenarios assume that the measures implemented do not give rise to considerable GDP losses.[9] GDP losses would be larger if measures to reduce emissions are implemented late or abruptly, or are poorly coordinated. Although the costs would then be incurred at a later point in time, they would be higher overall. From a macroeconomic perspective, these results indicate that the best option is to take decisive steps to implement climate policy action at an early stage.

7 Even if this approach is coupled with the NiGEM model, the country-specific NGFS scenarios do not factor in the additional spillover effects via international trade.
8 According to the calculation by Burke et al. (2015), whose estimation equation is based on a similar specification to that on pp. 39 ff., global GDP losses in 2100 amount to 23%.
9 The assumption that at least some of the tax revenue from carbon pricing is used to finance productive investment plays a major role here (see Etzel et al. (2021)). The information for more stringent climate protection measures refers to the NGFS' "Net Zero 2050" and "Below 2°C" scenarios. The information pertaining to national contributions to climate protection pledged at present refers to the "Nationally Determined Contributions" scenario.

ments. On the other hand, weather extremes could act as an indirect stimulus to aggregate growth, by encouraging innovation and the use of more productive substitute capital. In keeping with this, the empirical evidence on the long-term macroeconomic implications of extreme weather events also paints a mixed picture. While there are indications of macroeconomic effects of a negligible or even stimulating nature, there are also a host of studies pointing towards longer lasting negative pressures.[59]

Other factors alongside geographical location decisive in determining macroeconomic significance of weather extremes

The macroeconomic significance of weather extremes is also dependent on how vulnerable a particular country is. Geographical location is a central factor. For instance, in the past the concentration of extreme weather events in the Asia-Pacific region was many times higher than that in western Europe.[60] Besides geography, a country's vulnerability is further influenced by demographics, agglomeration patterns and other socioeconomic factors.[61] The structure of the economy is also likely to play a significant role, for example on account of the economic relevance of sectors that are particularly vulnerable to extreme weather, such as agriculture.

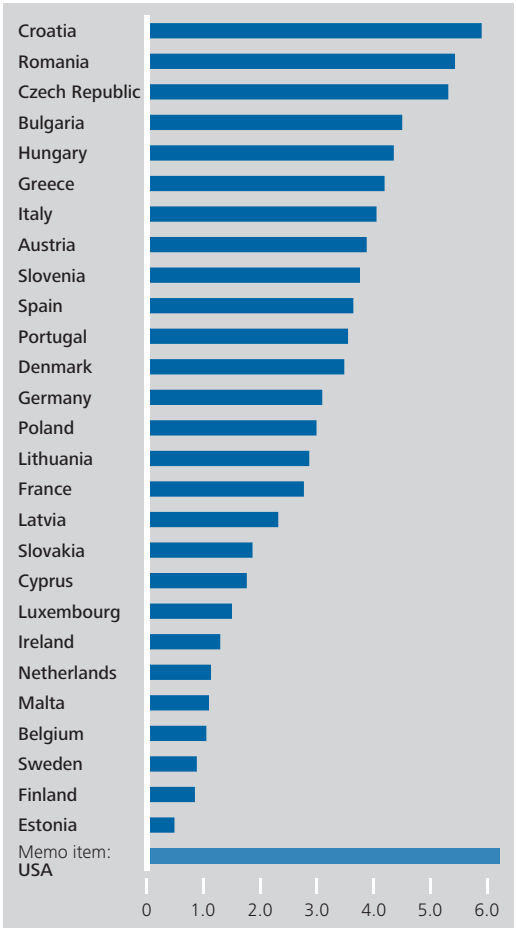
Significant differences between countries and regions in level of damage from extreme weather

It follows that estimates for the macroeconomic damage caused by weather extremes are different for different regions of the world.[62] So far, economic damage in Asia has been many times higher than that seen on the continent of Europe.[63] There have also been differences throughout Europe, however. Relative to respective GDP, the cumulative economic damage of the last 40 years was significantly lower in Estonia and Finland and considerably higher in Greece, Spain and Italy than in the rest of the euro area. That said, the measured losses were far lower even in the worst-hit euro area countries than in other parts of the world.[64]

From a monetary policy perspective, the primary question when it comes to shocks such as the occurrence of extreme weather events is whether and to what extent the associated disruptions to supply and demand widen or narrow the output gap in the short and medium term and increase or reduce inflationary pressures.[65] Looking at the average level of eco-

Cumulative damage in the EU caused by extreme weather and climate change*

As a percentage of 2019 GDP



Sources: European Environment Agency, Haver Analytics, Munich Re, NOAA's National Climate Data Center and Bundesbank calculations * Cumulative economic damage resulting from meteorological disasters (including extreme temperatures and storms), hydrological disasters (including floods) and climatological disasters (including droughts) from 1980 to 2019.

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No crucial significance for monetary policy in euro area in view of economic losses experienced thus far

59 See Cavallo and Noy (2011), Jahn (2015) and Botzen et al. (2019).
60 See Cavallo and Noy (2011) and Centre for Research on the Epidemiology of Disasters (2020).
61 See, inter alia, Intergovernmental Panel on Climate Change (2012).
62 See, inter alia, Wallemacq et al. (2018).
63 According to the Emergency Events Database (EM-DAT), the recorded cumulative absolute economic damage resulting from meteorological, hydrological and climatological disasters was roughly three times higher in Asia than in Europe for the period from 2000 to 2020. The data are available at https://www.emdat.be/
64 See Wallemacq et al. (2018).
65 See also Deutsche Bundesbank (2021c).

Number of recorded extreme weather events and wildfires in Europe*

Rolling average of the last ten years

Sources: Emergency Events Database and Bundesbank calculations. * Extreme weather events refer to meteorological disasters (including extreme temperatures and storms), hydrological disasters (including floods) and climatological disasters (including droughts). The data used cover the following European countries: Albania, Austria, Belgium, Bulgaria, France, Germany, Greece, Italy, the Netherlands, Norway, Poland, Portugal, Romania, Switzerland, Spain and the United Kingdom.

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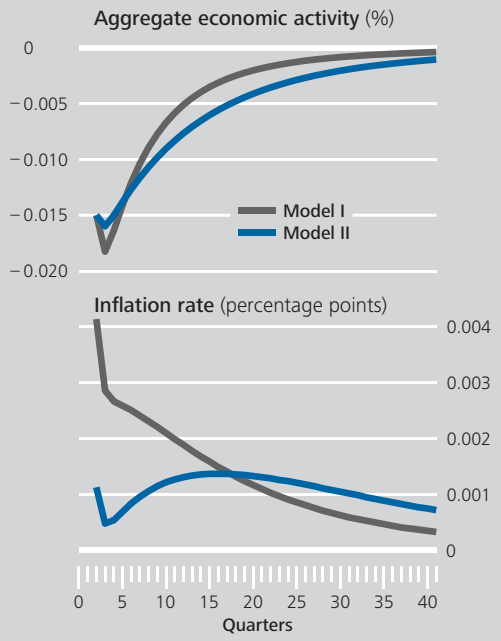
Simulated impact of an extreme weather event under different sectoral disaggregation approaches*

Deviation from deterministic equilibrium



* Impulse responses of aggregate economic activity and annualised inflation rate when using a DSGE model with (model 1) and without (model 2) sectoral production linkages.

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nomic losses to date, it appears that weather extremes are of at least no crucial significance for monetary policy in the euro area.[66]

Relevance for monetary policy in currency area may grow in future though, …

That said, the significance of weather extremes for monetary policy in the euro area could grow.[67] There has already been a considerable increase in the frequency of extreme weather events in Europe in recent decades. It is also conceivable that the rise in weather events of macroeconomic significance in other parts of the world will lead to increasing spillover effects for Europe in future. Furthermore, the mounting incidence of weather extremes could lead to abrupt adjustments in climate policy and thereby to unexpected changes with a bearing on the economy as a whole.[68]

… which would have a bearing on macroeconomic analysis

In addition, the increased frequency of weather extremes is likely to make macroeconomic analysis harder for central banks. This applies both to the identification of relevant economic drivers and the preparation of projections, for instance due to the uncertainty surrounding the horizon over which extreme weather events will exert an effect. Moreover, the established analytical tools may not adequately capture the transmission mechanisms of weather-related disturbances. For example, using a DSGE model, it can be shown that the magnitude of the consumer price response following a weather-induced supply-side shock is heavily dependent on the assumed sectoral structure.[69] A model version without sectoral linkages, of the kind typically used for macroeconomic an-

66 See also Dafermos et al. (2021).
67 See also Böhnisch et al. (2021) and Kuhla et al. (2021).
68 For instance, the series of accidents at the Japanese nuclear power plant Fukushima Daiichi set off by a tsunami had far-reaching implications for economic policy in Germany.
69 The analytical framework used here is a prototypical closed-economy New Keynesian model with physical capital, imperfect competition and nominal price rigidities (see, inter alia, Woodford (2003)). The model is calibrated for the European Union together with the United Kingdom. The specification of the multi-sectoral variant is based on the EMuSe model. See the box on pp. 50 ff.

alysis to date, shows considerably weaker effects than the multi-sectoral variant.[70]

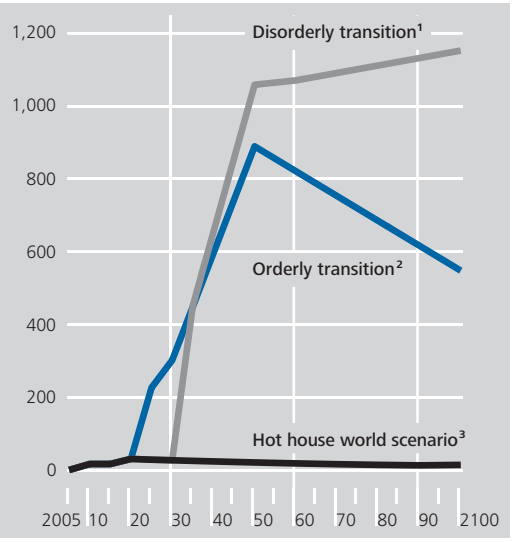
Macroeconomic impact of climate policy

Objectives behind climate policy initiatives

It is not just climate change itself but also the measures introduced with a view to mitigating it that are likely to have a significant macroeconomic impact. In December 2015, 196 countries adopted the Paris Agreement, setting the minimum goal of limiting the increase in the global average temperature to well below 2°C compared to pre-industrial levels.[71] Global greenhouse gas emissions need to be significantly reduced over the coming years if these goals are to be achieved.[72] With this in mind, various measures are being considered. These include a sometimes substantial increase in the cost of greenhouse gas emissions, for example, by introducing emissions taxes or an emissions trading scheme, setting emissions caps or even completely banning certain emissions-intensive economic activities or products.

Projected annual carbon prices in the EU for selected transition scenarios*

US$ per tonne of CO_2 in 2010 prices



Source: NGFS. * The carbon price projections were generated using the Potsdam Institute for Climate Impact Research's REMIND model. **1** It is assumed that far-reaching climate action with a view to limiting global warming to less than 2°C compared with pre-industrial levels is not implemented until 2030. **2** Climate policy's level of intervention is assumed to increase steadily up to the middle of the century with the aim of limiting the rise in the global average temperature to 1.5°C above pre-industrial levels. **3** Only currently implemented climate policies are preserved.

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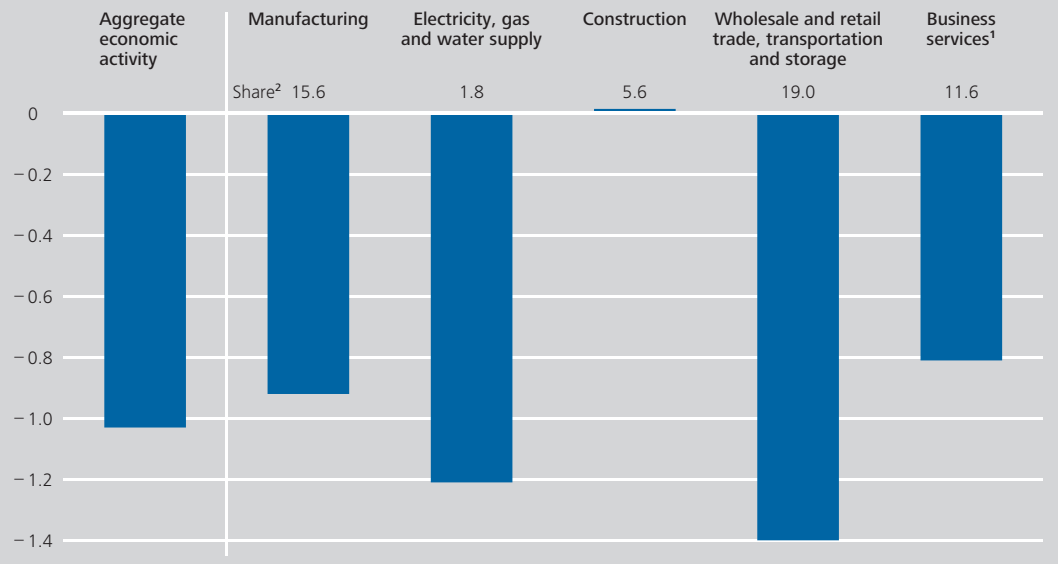
Supply-side effects

The transition to a less carbon-intensive economy may give rise to considerable supply-side strains.[73] These include direct costs as a result of emissions pricing but also increased prices for emissions-intensive intermediate inputs, outlay to avoid emissions or expenses incurred in aligning production with new policies, and losses due to asset repricing.[74] The economic ramifications for firms are likely to depend on the type and nature of interventions as well as the characteristics of the particular economic sector they belong to. This includes the specific emissions and energy intensity as well as the respective market position, the latter being a pivotal factor governing the extent to which costs can be passed on, for example.[75] However, climate policy initiatives may also be designed with a view to incentivising green innovation by firms. This can foster technological advances that boost productivity.[76]

70 The extreme weather event is modelled as a temporary negative supply-side shock, the strength of which is specified such that when the shock occurs value added falls by 0.015% in the first quarter (i.e. 0.06% on an annual basis) in both model versions. This calibration is based on the estimates of Dafermos et al. (2020).
71 Ideally, global warming should be limited to 1.5°C as this would significantly reduce the risks associated with climate change compared with a 2°C scenario. See United Nations (2015).
72 The Intergovernmental Panel on Climate Change (IPCC) describes various scenarios compatible with meeting the goals agreed upon in Paris 2015. In a core scenario, achieving the 1.5°C goal would require global net CO_2 emissions to be cut by 45% compared to 2010 levels by 2030 and brought to zero by 2050. The 2°C goal would require a 25% reduction by 2030 and net zero by 2070. See Intergovernmental Panel on Climate Change (2018).
73 See also Batten (2018) and Andersson et al. (2020).
74 There is a risk of regulatory intervention leading to the sudden or gradual devaluation of a firm's capital ("stranded assets"). This might happen if the firm is no longer permitted to use that capital in production or if production processes cease to be economically viable due to increased emissions prices, for example. See also Deutsche Bundesbank (2021a, 2021b) and the article on pp. 63 ff.
75 See, inter alia, Ryan (2012), Bushnell et al. (2013) and Känzig (2021).
76 Initial findings suggest that carbon pricing introduced as part of the EU Emissions Trading System has spurred innovation in the field of low-carbon technologies. See Calel and Dechezleprêtre (2016) and Känzig (2021). For information on the macroeconomic significance of green innovation, see, inter alia, OECD (2011, 2017a) and European Commission (2019, 2021).

Difference in gross value added between a disorderly and an orderly transition in 2050*

Percentage points



Source: Bundesbank calculations based on the DSGE model EMuSe and projections by the NGFS. * The model is calibrated for the European Union together with the United Kingdom. The entire simulation period extends from 2005 to 2100. The chart shows the respective difference in real gross value added – expressed in relation to the baseline – between a disorderly and an orderly transition. The assumed paths of CO_2 emissions intensity and the carbon price are based on projections by the NGFS (REMIND model). Physical damage caused by emissions is not taken into account. In an orderly transition, climate policy's level of intervention is assumed to increase steadily up to the middle of the century with the aim of limiting the rise in the global average temperature to 1.5°C above pre-industrial levels. In a disorderly transition, it is assumed that far-reaching climate action with a view to limiting global warming to less than 2°C compared with pre-industrial levels is not implemented until 2030. **1** NACE sections M to N: Professional, scientific and technical activities as well as administrative and support service activities. **2** Percentage share of the economic sector in aggregate gross value added in 2019.

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Impact on demand side

Climate policy measures are also likely to have an impact on the demand side. Higher energy costs due to emissions pricing will squeeze the budgets of households and firms. This will tend to dampen consumption and investment, which in turn may affect wages and employment, bringing corresponding consequences for aggregate demand.[77] Individual households and firms may be affected to very different degrees, which would then have a bearing on macroeconomic developments.[78] On the other hand, demand-stimulating effects could stem from investment incentives, the distribution to households of revenue from emissions pricing or from additional public investment.

Predictability of climate policy highly relevant

The predictability of climate policy is likely to be highly relevant when it comes to macroeconomic effects. This is because uncertainty weighs on the consumption and investment decisions of households and firms. Developments that come as a surprise can also trigger extensive revaluations of financial assets, with corresponding consequences for financial stability.[79]

The overall result is a complex layering of supply and demand-side effects whose macroeconomic net impact is not always clear up front.[80]

77 But regulatory requirements, tax incentives and subsidies, higher use costs and changes in preferences may also have a lasting impact on the consumption and investment decisions of households and firms.
78 Empirical studies suggest that low-income households take a comparatively greater hit from the effects of an increase in energy prices. See Känzig (2021).
79 The article on pp. 63 ff. of this report (entitled "Scenario-based equity valuation effects induced by greenhouse gas emissions") quantifies the emissions-related changes in the valuation of global joint stock companies in the event of a swing in market expectations from a scenario where Nationally Determined Contributions are being implemented to a transition scenario in line with the Paris Agreement. See also Deutsche Bundesbank (2021b).
80 Quantitative studies also arrive at correspondingly differing results. In the context of its model analyses, the IPCC concludes that scenarios with a likelihood of limiting global warming to 2°C compared to pre-industrial levels would entail losses in consumption amounting to 2% to 6% of global GDP in 2050. By contrast, the OECD, for example, anticipates a positive growth effect from such a transformation in an ideal case. See Intergovernmental Panel on Climate Change (2014) and OECD (2017a).

Net macroeconomic effect of climate policy measures not always clear

Depending on how it is designed, climate policy may, in the short to medium term, go hand in hand with either a shrinking or a growing output gap and commensurately lower or higher inflationary pressures. Taken by itself, decisive action to mitigate climate change would probably have an initial dampening effect on aggregate growth, but climate-related damage would be reduced in the longer term. The medium-term impact on economic growth also hinges on the design of climate policy and its predictability.[81]

Higher carbon pricing likely to fuel consumer price inflation, at least temporarily

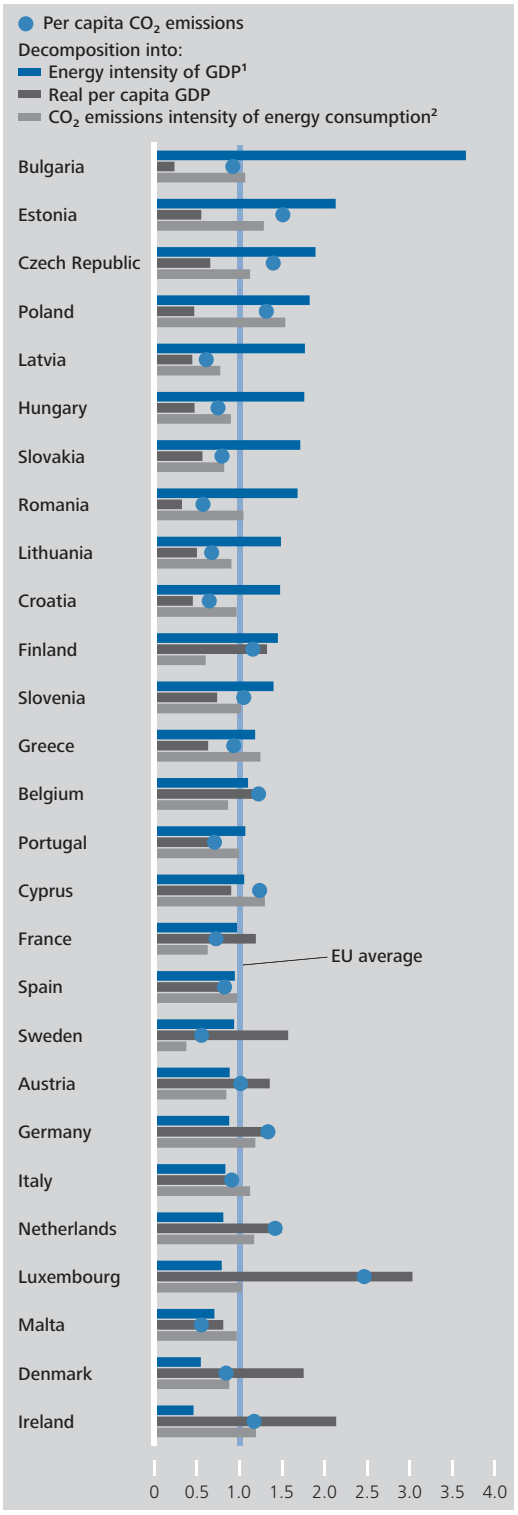
It is likely that a tighter carbon pricing regime would at least temporarily lead to higher inflation. The magnitude of the effect depends primarily on the timing of the climate policy measures, as shown, for example, by macroeconomic climate model projections performed as part of work by the Network of Central Banks and Supervisors for Greening the Financial System (NGFS). The carbon price pathway of an orderly transition where the degree of climate policy intervention is gradually increased exhibits considerable differences from the carbon price pathway under a disorderly climate policy, where it is assumed that intervention comes much later but is then all the more stringent.[82]

Climate policy has varying …

It must be borne in mind that the burden of climate policy measures varies from one economic sector to the next, a fact that can be illustrated by simulations using the environmental multi-sector DSGE model EMuSe (see the box on pp. 50 ff.). Especially in the case of

Decomposition of per capita CO_2 emissions for the EU Member States in 2019

In relation to EU average



Sources: Eurostat and Bundesbank calculations. **1** Ratio of primary energy consumption to GDP. Primary energy consumption comprises gross domestic consumption and does not include non-energetic use of energy carriers. **2** Ratio of CO_2 emissions caused by energy consumption to primary energy consumption.

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81 One factor here is the extent to which carbon revenues are channelled into productive investment.

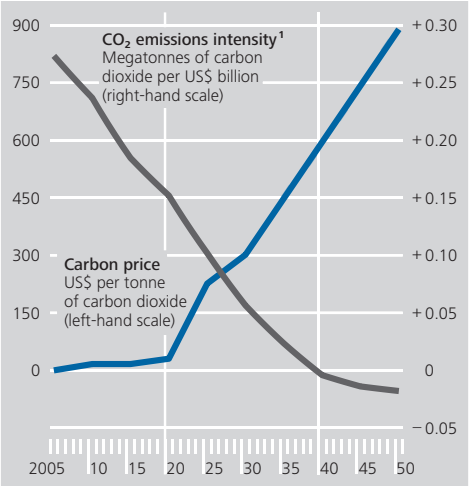
82 Simulations on the basis of the NiGEM global economic model developed by the National Institute of Economic and Social Research suggest that even an orderly transition scenario could imply significant price increases in the euro area for a time. According to the model projection, consumer price inflation would sit approximately 1 percentage point above the baseline on an average for 2025 to 2035, before moving back towards it over the course of the following decade. The projections are based, amongst other things, on an average carbon price calculated as the arithmetic mean of the carbon price pathways from three of the IAMs used in the NGFS climate scenarios (see Network of Central Banks and Supervisors for Greening the Financial System (2021a)). For further information on NiGEM, see https://nimodel.niesr.ac.uk

On the role of sectoral linkages when analysing transition risks: the environmental multi-sector DSGE model EMuSe

Climate action may hit certain economic sectors especially hard,[1] which could have far-reaching consequences for financial stability, monetary policy transmission and aggregate growth. This is why it is important to keep an eye on sectoral developments and their macroeconomic implications when analysing climate action. Given the high level of aggregation of economic sectors in prototypical dynamic macroeconomic models, this is either not possible or possible to only a limited extent. Meanwhile, traditional multi-sector models are generally static and focus on long-term equilibria. They are not suitable for analysing key adjustment processes. The Bundesbank therefore developed a dynamic stochastic general equilibrium (DSGE) model with a multi-sector production structure.[2]

Projections of annual carbon prices and CO_2 emissions intensities in the European Union in an orderly transition*

2010 prices



Sources: NGFS and Bundesbank calculations. * The carbon price and CO_2 emissions intensity projections were generated for the European Union together with the United Kingdom using the REMIND model developed by the Potsdam Institute for Climate Impact Research. In an orderly transition, climate policy's level of intervention is assumed to increase steadily up to the middle of the century with the aim of limiting the rise in the global average temperature to 1.5°C above pre-industrial levels. **1** Ratio of CO_2 emissions to macroeconomic activity.

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This model contains both key economic and ecological variables such as CO_2 emissions. In addition, it can analyse international linkages between up to three countries or regions. This allows the model, named EMuSe (Environmental Multi-Sector),[3] to be adapted flexibly to various policy questions.[4]

The EMuSe model allows for a relatively detailed examination of the interrelationship between the economy and climate policy. Particularly significant in this regard is the fact that, in the EMuSe model, enterprises use not only capital and labour but also intermediate inputs to produce output. These can come from any sector, although the extent to which various inputs are substitutable is limited. The composition of the intermediate input bundles varies depending on the sector.

The role played by intersectoral linkages can be illustrated by comparing the simulation results for the multi-sector model with a version without a sectoral breakdown or the corresponding linkages.[5] The impact of carbon pricing on aggregate growth and CO_2 emissions for the European Union and the United Kingdom is analysed here as an

1 See also the remarks on this topic on p. 49.
2 A typical feature of this model class is the way it seeks to explain relationships and developments based on the individual optimal decisions of (typically) rational economic agents. For a detailed explanation of this model framework, see, inter alia, Christiano et al. (2018).
3 A detailed description of the EMuSe model can be found in Hinterlang et al. (2021).
4 Both flexible prices and price rigidities can be assumed, for example.
5 Both models are parametrised to depict the European Union along with the United Kingdom. The aggregate emissions level and aggregate economic activity are identical at the start of the simulation in both versions of the model. The production structure of the multi-sector model comprises ten sectors.

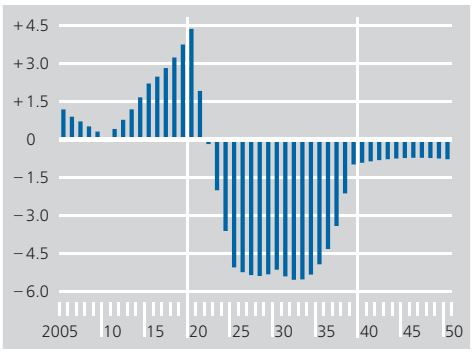
example. For the purposes of simplification, external trade links are excluded and the European Union and the United Kingdom are depicted together as one region. The assumed trajectory for the carbon price is based on the projections made by the Network of Central Banks and Supervisors for Greening the Financial System (NGFS) for an orderly climate policy transition. In these projections, climate policy's level of intervention is assumed to increase steadily up to the middle of the century with the aim of limiting the rise in the global average temperature to 1.5°C above pre-industrial levels.[6] From 2020 onwards, in particular, the carbon price rises sharply.

The costs arising from carbon pricing for enterprises within a sector depend on the carbon price, the sector-specific CO_2 emissions intensity and output level. The analysis assumes that the trajectory of the emissions price and the sectoral emissions intensity given for the simulation period from 2005 to 2100 is known to all agents in the model.[7] Changes in the emissions intensity over time can be understood here as an approximation of the impact of exogenous environmentally friendly technological progress.[8] In the multi-sector version of the model, it is assumed, for simplicity, that the emissions intensity will change to the same extent across all sectors.

Although the development of CO_2 emissions is very similar in both model versions under these assumptions, there are significant differences in terms of aggregate growth. This is due to the shifts in the production structure triggered by climate action and the consequential effects of these shifts, which are disregarded in the single-sector version. The possibilities of substituting goods in individual sectors with the products of other economic sectors in the production process, as well as complementarities, play a pivotal role. The energy sector, for instance, is particularly affected by carbon pricing, which means that the price of energy will rise faster than many other prices. However, there are limits to the extent that energy can be substituted with other goods as there are complementarities between energy and other intermediate goods. This is why demand for all types of intermediate inputs drops following a strong rise in energy prices, and output is scaled back.

Difference in real gross value added in an orderly climate policy transition under different sectoral disaggregation approaches*

Percentage points



Source: Bundesbank calculations based on the DSGE model EMuSe and NGFS projections. * The model is calibrated for the European Union together with the United Kingdom. Calculated as the deviation of a ten-sector variant of the model from the one-sector version. The total simulation period spans from 2005 to 2100 and depicts the deviation from a situation without a carbon price and with constant CO_2 emissions intensities in 2005. The development of the CO_2 emissions intensities and the carbon price assumed for the simulation is based on the NGFS projections for an orderly transition scenario according to the REMIND model. In an orderly transition, climate policy's level of intervention is assumed to increase steadily up to the middle of the century with the aim of limiting the rise in the global average temperature to 1.5°C above pre-industrial levels.

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6 The NGFS's carbon price and CO_2 emissions intensity projections were generated using the REMIND-MAgPIE model developed by the Potsdam Institute for Climate Impact Research. See Network of Central Banks and Supervisors for Greening the Financial System (2020).
7 The trajectory of the emissions intensity is also taken from the NGFS's projections. The changes in the carbon price and sectoral emissions intensities thus enter EMuSe exogenously. By contrast, the aggregate emissions intensity (the ratio of aggregate emissions to aggregate economic activity) is endogenous.
8 See also Csereklyei et al. (2016).

According to the simulation, in the multi-sector version, it was possible to make use of the relief provided by the scope for substitution when carbon prices were still low initially. From around 2020 onwards, however, complementarities weighing down on the economy dominate on account of the considerable rise in the carbon price.[9]

The simulation results show that taking into account the sectoral linkages of an economy can be important not only to structural analysis and considerations of financial stability, but also to macroeconomic analysis.[10] This is especially true for larger sectoral shocks, such as the occurrence of physical climate risks or unexpected climate action.

9 Although the level of detail is relatively high, the version of EMuSe used here has been simplified, in some ways considerably. Simplifications include the assumption of homogeneous household preferences that remain constant over time, the omission of endogenous technological progress and the assumption of a closed economy. The results should therefore be interpreted with caution.
10 See also Baqaee and Farhi (2020).

a disorderly transition, it becomes apparent that risk concentrations develop in specific economic sectors. This can contribute to the build-up of systemic risk in the financial system, which could jeopardise financial stability and thus the fulfilment of the monetary policy mandate.[83]

… and sometimes long-lasting impact on individual sectors

It is also probable that climate policy will bring about lasting structural changes, with some economic sectors gaining in importance and others losing ground. This could have repercussions for economic growth and price developments as well as indirect ramifications for monetary policy transmission. The extent to which this will be the case is contingent on sector-specific characteristics such as emissions and energy intensity or how sensitive demand is to changes in price. The degree of friction in product and financial markets is also likely to play a role. Analytical tools such as the EMuSe model can supply helpful insights here.

Regional differences in impact of climate policy

How intense the effects of a harmonised climate policy are can also differ on a regional basis. For example, a decomposition of per capita CO_2 emissions in the European Union (EU) reveals significant differences between Member States with respect to the energy intensity of gross domestic product (GDP) and the CO_2 emissions intensity of energy production.[84] For instance, the average energy inten-

83 See also Deutsche Bundesbank (2021b).
84 In formal terms, the decomposition is expressed as $\widetilde{CO2_i/POP_i} = \widetilde{GDP_i/POP_i} * \widetilde{Energy_i/GDP_i} * \widetilde{CO2_i/Energy_i}$, where $\widetilde{X}_i = X_i / X_{EU}$ is the ratio of a factor in country i to the average for the EU. The decomposition makes it possible to break the annual per capita CO_2 emissions ($CO2_i/POP_i$) in the EU Member States down into different determinants. These include overall output, measured as per capita GDP (GDP_i/POP_i), the energy intensity of GDP ($Energy_i/GDP_i$), given by the ratio of primary energy consumption to GDP, as well as the CO_2 emissions intensity of energy consumption ($CO2_i/Energy_i$), which represents the ratio of CO_2 emissions to primary energy consumption. Primary energy consumption is gross domestic energy consumption excluding energy carriers used for non-energy purposes; the CO_2 emissions are those resulting from the use of energy. In the interests of comparability, the factors are normalised by placing them in relation to the EU-wide average. See also Kaya and Yokobori (1997).

sity of GDP is much higher in the central and eastern EU Member States than in the rest of the EU.

Influence of international climate policy

It is not just domestic climate policy that is expected to exert a considerable influence on macroeconomic developments; climate policy abroad is also likely to be highly influential. For example, unilateral climate policy measures could lead to goods with high emissions and energy intensity profiles increasingly being sourced from overseas. The sector mix at home and abroad would alter, affecting macroeconomic developments and the efficiency of climate policy measures. This is also borne out by EMuSe simulations specifying a carbon pricing regime for the EU while the rest of the world takes no climate policy action. As a result, the share of value added accounted for by the EU manufacturing sector would drop distinctly, partly because of the sector's emissions-intensive products being increasingly sourced from other countries. Emissions would therefore be shifted abroad. Possibilities for counteracting this include a countervailing charge in the form of a climate tariff or alternatively the development and application of new, greener technologies that boost carbon productivity at home.[85]

Monetary policymakers should closely monitor climate policy processes

Climate policy measures can therefore have significant macroeconomic effects, the specifics of which will hinge on their precise design, the economy's capacity to adapt and the external setting. Central banks need to pay heed to all of this when conducting their analyses. This requires the right kind of data and the right kind of analytical tools.[86]

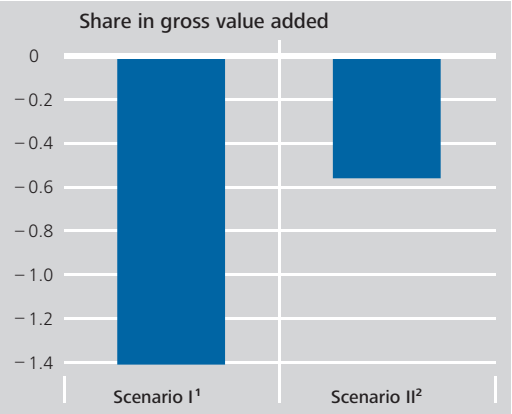
Outlook

Impact of climate change and climate action likely to pose greater challenges to monetary policy in future

The Eurosystem's monetary policy is geared towards safeguarding price stability and helping to ensure a stable financial system. To achieve these goals, it is important to adequately assess short and long-term economic developments. Global climate change and climate action pose new challenges in this context. It is therefore necessary to review and, where required, adjust the analytical toolkit available to monetary policymakers. This is also true of macroeconomic analysis, which is key to monetary policy decision-making. Alongside the impact of extreme weather events and gradually rising temperatures, it is notably the macroeconomic repercussions of climate policy that are likely to become significant in the near future. Climate policy measures may trigger far-reaching structural adjustment processes that also transcend national borders; if their macroeconomic implications are to be adequately gauged, models with sufficient regional and sectoral differentiation are needed. This article presents EMuSe, a multi-sector environmental DSGE model that can be adapted flexibly to varying requirements

Effects of unilateral introduction of a carbon price in the EU on manufacturing*

Percentage point change, 2050 versus 2019



Source: Bundesbank calculations based on a two-region version of the DSGE model EMuSe and projections by the NGFS. * The model is calibrated for the European Union (together with the United Kingdom) and for the rest of the world. The simulation period extends from 2005 to 2100. In the rest of the world, no carbon price is introduced, and the sectoral CO_2 emissions productivity, which gives the ratio of economic output to emissions, is constant. The paths of CO_2 emissions productivity and of the carbon price in the EU assumed for the simulation are based on projections by the NGFS for an orderly transition scenario. In an orderly transition, climate policy's level of intervention is assumed to increase steadily up to the middle of the century with the aim of limiting the rise in the global average temperature to 1.5°C above pre-industrial levels. **1** Constant sectoral emissions productivity in the EU. **2** Rising sectoral emissions productivity in the EU.
Deutsche Bundesbank

85 Carbon productivity measures the ratio of economic output to emissions. See also OECD (2017b).
86 See also Deutsche Bundesbank (2021a, 2021b).

and used to analyse a number of issues, including in an international context.

Fulfilment of monetary policy mandate crucial foundation for transition to a climate-neutral economy

Climate and economic policy can play a vital part in mitigating risks and uncertainties, particularly through long-term focus, consistency and efficiency. But the reduction of structural rigidities could likewise help smooth the transition to a climate-neutral economy. Both of these factors would also support a stability-oriented monetary policy. The Eurosystem has a role to play in ensuring the success of climate action by fulfilling its monetary policy mandate and thus providing a crucial foundation for the transition to a climate-neutral economy: price stability is a key prerequisite for price signals to take effect.

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Scenario-based equity valuation effects induced by greenhouse gas emissions

Corporate valuations are largely determined by investors' and market participants' expectations. These encompass expectations about the future trajectory of CO_2 prices just as much as expectations about how sharply a company can reduce its greenhouse gas emissions by adjusting technology in response to rising emissions costs. Where expectations shift from a scenario in which Nationally Determined Contributions are implemented to a scenario aligned with the more ambitious Paris Climate Agreement targets, this could involve, in some cases, considerable valuation changes. In particular, it is then likely that companies will be revalued along the lines of their carbon footprint and their ability to bear the associated costs.

The present article introduces a simple indicator which quantifies the emissions-related changes in the valuation of stock corporations resulting from a shift from one scenario to another. Here, a multi-stage dividend discount model is calibrated on firm-specific greenhouse gas emissions and scenario data from a multi-regional integrated assessment model (IAM). The IAM used here models in a detailed fashion the energy systems in the individual regions of the world, amongst other things, and allows for temporary regional differences in climate policy. Under a set of assumptions, the measure presented in this article provides a risk indication for the firm's ability to bear scenario-dependent costs of direct greenhouse gas emissions. In this context, the results for 5,285 stock corporations from various countries indicate that a large percentage of them would sustain only minor emissions-related valuation losses as a result of a shift in expectations towards a transition to a Paris-aligned low-carbon economy. On the other hand, a segment of companies with high emissions costs and limited ability to bear these costs would suffer substantial valuation losses – especially in business areas oriented to fossil fuels. Climate-related valuation changes and the question of climate-related stranding of certain assets are therefore likely to play an important role in financial markets going forward.

Introduction

Climate change and climate policy affect corporate sector

The atmospheric concentration of carbon dioxide (CO_2) has gone up by over 25% in the past 50 years. At the same time, an increase in the global average temperature has been observed. There is now a consensus in the scientific community that the increasing concentration of CO_2 in the atmosphere is attributable to human actions and that there is a causal relationship between the CO_2 concentration and the rise in temperatures. A large number of recognised climate models therefore look at scenarios of future emissions of CO_2 and other greenhouse gases. At the heart of these scenarios is to identify which emissions pathways are associated with which climate impacts and temperature increases.[1]

Consistent with mounting signs of climate change, this scientific consensus is increasingly spilling over to the societal and political debates. It is widely agreed that greenhouse gas emissions need to be reduced in order to mitigate global warming. The outcomes of this consensus have been, in particular, the Paris Climate Agreement (COP21) and, most recently, the UN Climate Change Conference in Glasgow (COP26) and national climate action legislation.

The corporate sector is one of the largest emitters of greenhouse gases. Policy interventions aimed at reducing emissions will therefore also impact strongly on firms. The analysis presented here quantifies the impact of climate policy measures – here, in the form of long-term CO_2 price paths – on corporate valuation. The article will focus on the emissions-related stock market valuation effects that can be associated with a structural transition towards less carbon-intensive production. If, for example, climate policy is aligned with the Paris climate targets, leading to a transition to a low-carbon economy, the results presented here suggest that the valuations of a large proportion of companies will see only little change. For a segment of the firms, however, considerable shifts will occur, and some firms will see elevated insolvency risk (stranded assets).[2] The indicator proposed in this analysis has been kept simple by design. It factors out the firm-specific costs of avoiding emissions. The effects of progressive physical climate change, such as damage caused by extreme weather events, are not taken into consideration, either.

CO_2 price necessary for climate-friendly structural change

A key policy lever is the CO_2 emissions price, which is also applicable to other greenhouse gas emissions (expressed as CO_2 equivalents). This is likely to be the element on which climate-friendly structural change will hinge.[3] At the same time, the CO_2 price path determines the speed at which the relative prices of carbon-intensive products and services shift. The shift in relative prices therefore sets incentives to reconfigure business models and production processes and adapt supply chains. In this context, it is pivotal to head for a use of low-carbon energy sources. In the multi-regional climate-economic model applied here, too, the CO_2 price plays a key role.

Climate-economic models and climate scenarios used

Need for climate scenarios

Recourse is often taken to what are known as multi-regional integrated assessment models (IAMs), which incorporate the climate system, the economy and the energy and land-use systems. They allow scenarios for the climate system to be modelled as a function of climate policy and economic structures – especially regarding the use of fossil and non-fossil energy sources. Drivers here are the various emitters of CO_2 and other greenhouse gases and their emissions trajectories. Such scenarios serve as key pillars of climate policy decisions. It is not sufficient to analyse historical data in order to

1 See, for instance, Rogelj et al. (2019).
2 For more on asset stranding, see p. 68.
3 To wit, in a relevant special report published in 2019, the German Council of Economic Experts called for making the CO_2 price a core element of climate policy. See German Council of Economic Experts (2019).

adequately assess future climate risks: there are no historical precedents for either climate change caused by the burning of fossil fuels or efforts to transition from carbon-intensive to low-carbon economies.

In order to calculate policy-relevant climate-economic scenarios, climate research institutes generally use process-based IAMs which allow for differences in regional developments and which exactly model key sectors. The projections of these models can be used, inter alia, as inputs for central banks' economic models. Harmonised scenarios from such models also form, for instance, the analytical basis for the work carried out within the Network for Greening the Financial System (NGFS), a global network of central banks and supervisory authorities.[4] The baseline scenario in the relevant scenarios is usually the "business as usual" case, characterised by the complete absence of enhanced climate policy efforts. An alternative, somewhat more optimistic baseline scenario of the models consists in full implementation of "Nationally Determined Contributions" by policymakers.[5]

Scenarios calibrated in this manner come to the conclusion that the international community's current Nationally Determined Contributions will not suffice to achieve the Paris Climate Agreement targets.[6]

At centre stage: "Net Zero 2050" climate scenario …

This became clear at the COP26 climate conference in November 2021. It therefore cannot be ruled out that future governments will agree to take more ambitious climate action measures. Therefore, in scenario analyses, the aforementioned more optimistic baseline "Nationally Determined Contributions" scenario is frequently contrasted with a climate policy scenario in which emissions of CO_2 and other greenhouse gases are priced such that they are reduced considerably in keeping with the Paris Agreement. One of these scenarios is "Net Zero 2050". Under this scenario, societies around the world begin today to reconfigure their economies to low-carbon economies in an orderly manner such that, by 2050, net CO_2 emissions are down to zero.

… with endogenous reductions in greenhouse gas emissions

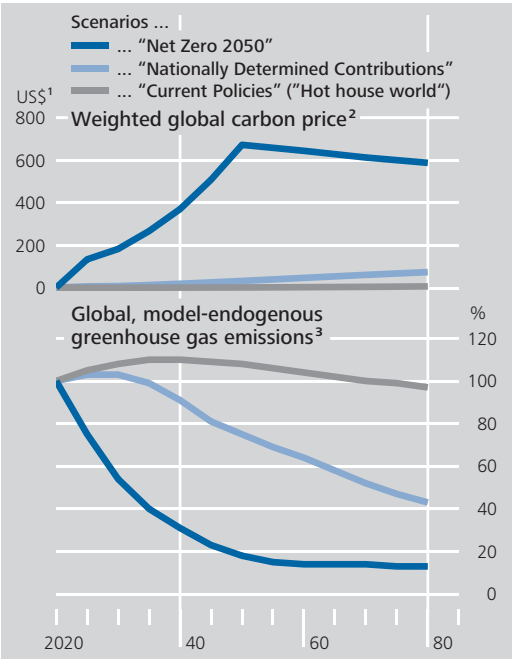
In the IAMs, representative agents maximise their utility while complying with restrictions on cumulative emissions of CO_2 and other greenhouse gases. In the "Net Zero 2050" scenario, their scope is compatible with the 1.5°C temperature target. Regional greenhouse gas emissions are an endogenous result of this maximisation. It is thus implicitly assumed that, in their production plans, companies choose their energy mix to minimise energy costs – depending on the regional availability of resources.[7,8]

Large differences in CO_2 prices between scenarios

The size of the differences between such scenarios is illustrated, in the chart on p. 66, in the time pathways for the CO_2 price and greenhouse gas emissions from a typical simulation of one of the IAMs used in the NGFS. To wit, in the "Net Zero 2050" scenario the global average CO_2 price already surges between 2020 and 2025, while it hovers near zero in the remaining scenarios up until 2030. Global greenhouse gas emissions accordingly continue to rise until 2030, whereas in the "Net Zero 2050" scenario they drop quickly after 2020. Within this Paris-aligned scenario, as in all scenarios used in the NGFS, regionally different CO_2 price trajectories and attendant emissions reductions are permitted (see the chart on p. 67). Here, the different initial conditions regarding

4 See NGFS (2021a, 2021b) as well as the NGFS Scenario Explorer (www.iiasa.ac.at). Since 15 December 2021, the NGFS has been comprised of 105 member institutions and 16 observers.
5 The implementation of Nationally Determined Contributions in IAMs is based on Roelfsema (2020); for a description of the Nationally Determined Contributions, see United Nations Framework Convention on Climate Change (2021).
6 See, for instance, Boehm et al. (2021).
7 In this scenario, there will continue to be a small amount of global CO_2 emissions after 2050, but these will be offset by CO_2 withdrawals elsewhere. Cost-minimising behaviour which also allows for regional differences in CO_2 pricing is a property of the category of "cost-effectiveness models". See, for example, Luderer et al. (2015) and Glanemann et al. (2020).
8 To achieve this temperature target, the trajectory of CO_2 prices is used as a conduit to determine cost-effective pathways of the prices of energy sources and greenhouse gas emissions. See Kriegler et al. (2013), Lontzek et al. (2015), Riahi et al. (2015), Riahi et al. (2017) and Rogelj et al. (2018).

CO_2 prices and pathways of greenhouse gas emissions in selected scenarios



Source: Potsdam Institute for Climate Impact Research (REMIND-MAgPIE). **1** At 2010 prices. **2** Weighted with regional gross CO_2 emissions. **3** 100% corresponds to 54 gigatonnes of CO_2 equivalents in 2020.
Deutsche Bundesbank

the use of the individual energy sources are taken into account.

In the spotlight: REMIND-MAgPIE model

We will refer below to projections for the baseline "Nationally Determined Contributions" scenario and a Paris-aligned "Net Zero 2050" climate scenario in the REMIND[9] model developed by the Potsdam Institute for Climate Impact Research. As in other internationally acclaimed and renowned models of this category of IAMs, this model is basically about projecting a large number of economic, energy-related, physical and climate-relevant indicators over long periods of time – generally until the end of the 21st century. On the basis of these model projections, we will investigate what valuation effects can occur in financial markets if the climate policy expectations "flip over" from this baseline to the "Net Zero 2050" climate scenario.

The REMIND model is a global general equilibrium growth model. This closed-economy model with twelve regions consists of a macroeconomic core and process-based modellings of the energy sector with all relevant greenhouse gas emissions.[10] Here, the energy module is connected to the macroeconomic core via energy demand and energy costs. Endogenous technological change all the way to climate-friendly energy production is allowed for via a global learning curve. The REMIND model can be linked up to a land-use model called MAgPIE.[11]

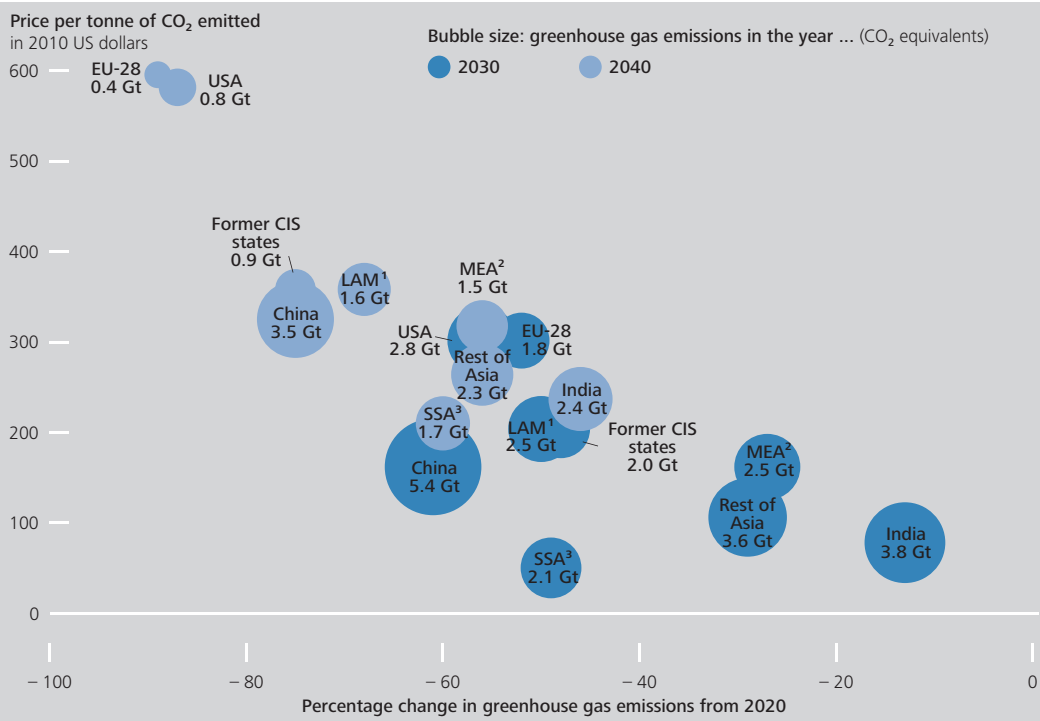
REMIND-MAgPIE is a global general equilibrium model

It is assumed in the "Net Zero 2050" scenario that the individual regions of the world begin to coordinate their climate policy approaches in the 2020 to 2025 period, with most regions initially starting out with CO_2 prices at different levels that gradually converge (by 2050) to a common trajectory. The REMIND-MAgPIE model allows an aggregated good, fossil fuels and bioenergy to be tradable across regions. Adequate mechanisms – such as carbon border adjustment mechanisms – permit regional differences in CO_2 prices charged without this leading to shifts in trade relationships. CO_2 price-induced competitive distortion or shifting of emissions to third countries – referred to as carbon leakage – can therefore be ruled out for energy-intensive goods.[12] There is therefore no contradiction between differences in CO_2 prices and coordination of regional climate policies: given that considerable transfers would be necessary in order to achieve the decarbonisation at the same CO_2 prices, initial price dif-

Assumption of globally coordinated climate policy measures

9 For more on the REMIND (Regional Model of Investments and Development) model, see Baumstark et al. (2021).
10 The climate system, including temperature estimation, is not modelled within the REMIND model but in a coupled model. The MAGICC 6 model is used here for NGFS scenarios; see Meinshausen et al. (2011).
11 See Dietrich et al. (2019). Land-use models such as MAgPIE combine economic and biophysical approaches in order to simulate spatially explicit global land-use scenarios (especially pasture, forest and cropland for food and bioenergy purposes) in the 21st century as well as interactions with the environment. In order to identify common transition pathways from energy and land-use systems in connection with the macroeconomic core, the REMIND model is therefore coupled either with land-use emulators or, in an iterative process, with the stand-alone MAgPIE land-use model.
12 In the REMIND model, there is only slight carbon leakage caused by price effects relating to fossil fuels.

Regional CO_2 prices and emissions reductions in the "Net Zero 2050" scenario



Sources: Potsdam Institute for Climate Impact Research (REMIND-MAgPIE) and Bundesbank calculations. **1** Latin America and the Caribbean. **2** Middle East, Central Asia and North Africa. **3** Sub-Saharan Africa.
Deutsche Bundesbank

ferentiation and gradual convergence are tolerated.[13]

Considerable reduction in emissions intensity necessary to switch to a Paris-aligned emissions pathway

On the basis of the REMIND-MAgPIE model, the chart on p. 68 illustrates the relationship between global greenhouse gas emissions and global GDP (at 2010 prices) for selected climate policy scenarios. It turns out that in a baseline scenario in which climate policy efforts remain unchanged globally ("business as usual"), there is virtually no reduction in emissions despite a certain decline in emissions intensity, which implies that global warming is not mitigated (median rise of 3.1°C by the year 2100).[14]

In the spotlight: comparison of valuation effects under different climate policy expectations

In the alternative baseline scenario, in which it is assumed that the Nationally Determined Contributions pledged by end-2020 are fully implemented, the reduction in emissions intensity – the amount of greenhouse gas emissions over GDP – is stronger, which means that emissions will decline to a certain extent in absolute terms beginning in 2030 (implying median global warming of 2.4°C by the year 2100). Both baseline scenarios can be compared with an ambitious global climate policy aligned with the Paris Climate Agreement targets: as the chart on p. 68 shows, a strong reduction in greenhouse gas emissions and thus in emissions intensity will be necessary to limit median global warming to 1.5°C. In a "Net Zero 2050" scenario, CO_2 prices already go up so sharply in the coming years that greenhouse gas emissions will decline in the current decade from 700g to 290g of CO_2 equivalents per real US dollar of GDP and keep falling to 130g by 2040. Whereas historical reductions in intensity were primarily based on improved energy efficiency, such a rapid reduction is possible only if energy supply is changed over to climate-friendly technologies – mainly based on renewable energy sources.

13 See Bauer et al. (2020).
14 See the chart on p. 73.

Relative decarbonisation in selected scenarios

Sources: World Bank (World Development Indicators), Potsdam Institute for Climate Impact Research (REMIND-MAgPIE) and Bundesbank calculations.
Deutsche Bundesbank

Nationally Determined Contributions as a baseline scenario

The scenario of Nationally Determined Contributions shall serve as the baseline scenario below – thereby assuming that it is an accurate reflection of current market expectations.[15] This is against the background of existing empirical evidence which indicates that greenhouse gas emissions influence companies' financial market prices to a certain extent. However, there are no signs to date that corporate valuations are broadly consistent with a Paris-aligned transition scenario.

Climate risks and stranded assets

Properties of stranded assets

"Stranded assets" are currently being increasingly discussed as a possible by-product of climate change. An asset is said to be stranded prior to the end of its useful economic life – as expected at the time of investment – if this asset can no longer yield any economic return and thus loses its entire value. In the context of climate change, losses in value can be caused by physical damage, regulatory intervention or structural change. Value losses can occur – potentially abruptly – if already-made investments are rendered unprofitable by unexpected policy measures or extreme weather events.

With regard to "green" structural change or the transition to a low-carbon economy – much in the spirit of "creative destruction" – it may, however, be necessary to strand certain business models if the goal is the efficient use of funds for necessary investment in financial markets.

"Unburnable carbon"

There is a wide body of literature which studies the potential losses of asset values caused by climate change. Meinshausen et al. (2009) discuss the "stranded assets" hypothesis by showing the limited amount of CO_2 that could be emitted by 2050 in order to have a high probability of keeping global warming below 2°C by 2100. The logical consequence of these calculations is that a substantial portion of existing fossil fuel inventories would have to remain in the ground ("unburnable carbon"). McGlade and Ekins (2015) show that, between 2010 and 2050, one-third of oil reserves, one-half of gas reserves and over 80% of coal reserves would have to go unextracted in order to meet the two-degree goal. In order to have a 50% chance of not exceeding a temperature increase of 1.5°C, according to Welsby et al. (2021), even nearly 60% of oil and gas reserves and 90% of coal reserves would have to remain in the ground.[16] This would render a substantial proportion of fossil fuel assets worthless.

15 In the REMIND-MAgPIE model, economic agents are assumed to have perfect prior knowledge of the scenario in which they are agents. No sudden turnaround in expectations is modelled within the scenarios under review.
16 According to Welsby et al. (2021), global oil and gas production would have to fall by 3% per year by 2050 in order to achieve this target. That would, in turn, make unprofitable many fossil fuel production projects that are either being planned or up and running.

Methodological approach to quantifying emissions-related changes in value and potentially stranding assets

Top-down approach

Various approaches to quantifying climate-related changes in asset values have been proposed in the literature. One of these consists in incorporating projections of the aforementioned macroeconomic climate scenarios into a large macroeconometric model such as NiGEM[17] and, in a first step, identifying country effects for economic output and equity prices within a given transition scenario.[18] In a second step, the resulting trajectories are linked to the results of a sector model in order to assign valuation effects resulting from a switch from a baseline scenario to a more ambitious transition scenario to individual securities depending on the sector of the issuer.

Firm-level approaches

Battiston et al. (2017) and Roncoroni et al. (2021) take another path. They examine risk exposure in institutional portfolios and, on this basis, answer the question as to how climate policy risks might propagate through the financial system, using their own sector classification (referred to as "Climate Policy Relevant Sectors").[19] As regards equity valuation, Battiston et al. (2021) suggest estimating a firm's dividend path in proportion to output. They in turn then model future output as a function of the observed climate scenario. The authors use the comparison between this pathway and the baseline scenario pathway to identify firm-level changes in value.

Scenario-based approach chosen here

We propose an alternative, innovative firm-level approach. As described above, climate-economic scenarios can be used to model the pathways to achieving the Paris Climate Agreement targets. Against this background, we develop a scenario-based price impact indicator based on the costs of direct greenhouse gas emissions attributable to non-financial corporations and then relate these to individual firms' dividend expectations. This indicator also incorporates projected macroeconomic output in the individual regions of the world and the use of individual fossil and non-fossil energy sources. The objective is to quantify the financial market implications of Paris-aligned climate action by taking recourse to projections in IAMs.

Constructing a scenario-based price impact indicator

Dividend discount model as a starting point

Market expectations determine price discrimination based on greenhouse gas emissions

As a rule, market participants' expectations about the climate policy pathways followed by the international community and companies' adaptability determine whether market valuations and financing conditions discriminate adequately between low-emissions and emissions-intensive business models.[20] Against this backdrop, the analysis described here starts by quantifying, in a first approximation, the corporate valuation effects as a result of an assumed switch from an expected implementation of "Nationally Determined Contributions" to the Paris-aligned "Net Zero 2020" scenario. Meanwhile, any imponderables in terms of the evolution of global CO_2 prices and the concomitant uncertainties this creates in financial markets are disregarded here.[21]

The value of companies under the scenarios outlined above can be calculated using a dividend discount model that incorporates long

17 NiGEM (National Institute Global Econometric Model) is a macroeconometric multi-country model developed by the National Institute of Economic and Social Research. See https://nimodel.niesr.ac.uk
18 See Vermeulen et al. (2018), Allen et al. (2020), Banque de France (2021), ECB/ESRB (2021) and Deutsche Bundesbank (2021). In a departure from the assumptions made in the "Net Zero 2050" scenario, Deutsche Bundesbank (2021) assumes that revenue from CO_2 pricing is not used to finance public investment but instead to cut income taxes.
19 See www.finexus.uzh.ch/en/projects/CPRS.html
20 Dunz et al. (2021) and Battiston et al. (2021) demonstrate, for instance, that the pricing of companies' transition risk changes depending on market expectations – in the form of different capital costs, say.
21 See, for instance, Gollier (2021).

An emissions-related price impact indicator

A multi-stage dividend discount model – which allows for the incorporation of scenario-specific projections – was chosen as a basis for the construction of an emissions-related price impact indicator. The relationship between the share price $V_{i,r,s,2020}$ of company i at the base date (here: December 2020) and the future dividends $D_{i,r,s,\tau}$ in the baseline scenario (here: "Nationally Determined Contributions") is shown in equation (1). Here, it is assumed that the baseline scenario is the scenario expected at the end of 2020 in the markets for company i domiciled in region r and whose core business is in sector s:

(1)
$$V_{i,r,s,2020} = \sum_{\tau=2021}^{2024} \frac{D_{i,\tau}^{IBES}}{(1+R_i^{base})^{\tau-2020}} + \sum_{\tau=2025}^{2032} \frac{D_{i,r,s,\tau}^{transition\_base}}{(1+R_i^{base})^{\tau-2020}} + \sum_{\tau=2033}^{2100} \frac{D_{i,r,s,\tau}^{base}}{(1+R_i^{base})^{\tau-2020}} + \frac{D_{i,r,s,2100}^{base}}{R_i^{base} - (g_{r,s,2100}^{Y,base} + \pi)} (1+R_i^{base})^{-80}.$$

Equation (1) expresses the share price as the present value of future dividend flows, as described by the variables $D_{i,\tau}^{IBES}$, $D_{i,r,s,\tau}^{transition\_base}$ and $D_{i,r,s,\tau}^{base}$. The unknown variable for which this equation can be solved is the implied cost of equity (return on equity, R_i^{base}) as a firm-specific discount rate. For the first three years (2021 to 2023), dividend expectations $D_{i,\tau}^{IBES}$ drawn from analyst surveys (sources: IBES, Thomson Reuters) are introduced, which are assumed to be already priced in. For the following year (2024) the dividend expectation is approximated using the three to five-year IBES earnings growth expectation – which does not depend on the chosen scenario, either.[1] In the following assumed eight-year transition period (2025 to 2032), the company's dividends $D_{i,r,s,\tau}^{transition\_base}$ are projected based on an interpolation between the three to five-year IBES earnings growth expectations and the scenario-dependent, partly sector-specific economic output in the twelfth year (plus an inflation assumption).

In contrast to the three-stage dividend discount model,[2] no "steady state" dividend growth is assumed in the subsequent phase (2033 to 2100). Instead, the model assumes a trajectory of dividends $D_{i,r,s,\tau}^{base}$ proportional to economic output in the climate scenario under review up to the year 2100, plus an inflation assumption. Here, economic output refers either to nominal gross domestic product (GDP) or sectoral production in the baseline scenario for the region in which the company is domiciled. If the company is an oil, gas or coal producer or is active in the fields of renewable or nuclear energy, its dividends are projected in proportion to the trajectory of energy production in the respective sector. If it is a cement or steel company, its dividends are projected in proportion to the trajectory of either cement or steel production, respectively.[3]

Projections arising from the REMIND-MAgPIE model are available up to the year 2100 and are accordingly incorporated. For the following period, it is assumed that dividends continue to grow at the rate last projected in the baseline scenario for sector s and/or GDP $g_{r,s,2100}^{Y,base}$ in region r, plus the inflation assumption.

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1 Should the latter not be available for a company, it is approximated by extrapolating the dividend growth between years two and three for a further year.
2 See Deutsche Bundesbank (2016).
3 The REMIND-MAgPIE model provides separate, regional emissions pathways for the cement and steel industries, which must be separately taken into account.

The second step involves projecting firm-specific additional costs from greenhouse gas emissions that are incremental to the baseline scenario. The central focus here is the scenario of an orderly transition to a Paris-aligned low-carbon economy ("Net Zero 2050"). The starting point is direct greenhouse gas emissions, expressed in CO_2 equivalents. These data are taken from company reports or estimated by specialised data providers (source used here: ISS-ESG). The emissions data per share $c_{i,0}$ underlying the analysis are for 2019.

In addition to the size of company emissions per share at time τ ($c^{NZ}_{i,r,\tau}$ or $c^{base}_{i,r,\tau}$), the CO_2 price in region r determines the emissions costs per share ($C^{NZ}_{i,r,\tau}$ or $C^{base}_{i,r,\tau}$) in the Paris-aligned "Net Zero 2050" scenario and the baseline scenario:

(2a) $C^{NZ}_{i,r,\tau} = c^{NZ}_{i,r,\tau} \cdot p^{NZ}_{r,\tau}$,

(2b) $C^{base}_{i,r,\tau} = c^{base}_{i,r,\tau} \cdot p^{base}_{r,\tau}$.

Accordingly, the incremental costs per share $\Delta C^{sc}_{i,r,\tau}$ arising for company i in the "Net Zero 2050" scenario are calculated at every future point in time as the difference between (2a) and (2b).

(2c) $\Delta C_{i,r,\tau} = C^{NZ}_{i,r,\tau} - C^{base}_{i,r,\tau}$.

To quantify the future scenario-dependent emissions $c^{sc}_{i,r,\tau}$ for the company ($c^{NZ}_{i,r,\tau}$ or $c^{base}_{i,r,\tau}$), as well as the associated costs, they are projected as a function of the scenario-implied emissions growth rate:

(3)

$$c^{sc}_{i,r,\tau} \equiv c_{i,0} \prod_{n=1}^{\tau} (1 + g^{E,sc}_{r,n}),$$

where

$$g^{E,sc}_{r,n} \equiv \begin{cases} \left(\frac{E^{sc}_{r,t+5}}{E^{sc}_{r,t}}\right)^{\frac{1}{5}} - 1 \text{ for } E^{sc}_{r,t+5} \geq 0 \text{ and } t < n \leq t+5 \\ -1 \text{ for } E^{sc}_{r,t+5} < 0. \end{cases}$$

According to equation (3), $g^{E,sc}_{r,n}$ is the rate at which greenhouse gas emissions in future year n increase or decrease. It is determined using the scenario-specific emissions $E^{sc}_{r,t}$ and $E^{sc}_{r,t+5}$, which are available at five-year intervals $[t,\ t+5]$. The emissions of company i change cumulatively between the base date and year τ at the rate $\Pi^{\tau}_{n=1}(1 + g^{E,sc}_{r,n}) - 1$. It is thereby assumed that they evolve in proportion to overall emissions in the observed scenario. With respect to the "Net Zero 2050" scenario, this is compatible with a Paris-aligned decarbonisation.[4] If scenario-specific emissions are negative – due, for instance, to the use of carbon dioxide removal technologies – a complete decarbonisation is assumed ($g^{E,sc}_{r,n} = -1$). This means that no earnings stemming from negative emissions or lateral transfers are permitted at the company level.

Finally, the scenario-dependent dividend path of company i is reduced by the share x_i of the incremental cost from equation (2c) that the company cannot pass on to its customers by assumption. The valuation effect for a company arising from a revision of expectations from the baseline scenario towards the "Net Zero 2020" scenario is shown in equation (4):

(4)

$$\Delta^{v}_{i,r,s,2020} = \frac{1}{V_{i,r,s,2020}} \left(\sum_{\tau=2021}^{2024} \frac{D^{IBES\_NZ}_{i,r,s,\tau} - x_i \cdot \Delta C_{i,r,\tau}}{(1 + R^{base}_i)^{\tau - 2020}} + \sum_{\tau=2025}^{2032} \frac{D^{transition\_NZ}_{i,r,s,\tau} - x_i \cdot \Delta C_{i,r,\tau}}{(1 + R^{base}_i)^{\tau - 2020}} + \sum_{\tau=2033}^{2100} \frac{D^{NZ}_{i,r,s,\tau} - x_i \cdot \Delta C_{i,r,\tau}}{(1 + R^{base}_i)^{\tau - 2020}} + \frac{D^{NZ}_{i,r,s,2100} - x_i \cdot \Delta C_{i,r,\tau}}{R^{base}_i - (g^{Y,NZ}_{r,s,2100} + \pi)} (1 + R^{base}_i)^{-80} \right).$$

In equation (4), the bracketed term provides the present value of the dividends net of

4 Although compliance with the Paris Agreement climate targets is not necessarily limited to a reduction in direct (scope 1) company emissions, for the purposes of this analysis scope 1 decarbonisation in proportion with emissions reduction in the "Net Zero 2050" scenario is nevertheless defined as Paris-aligned.

the share of incremental costs that cannot be passed on ($x_i \cdot \Delta C_{i,r,\tau}$), taking into account the dividend path described by the variables $D_{i,r,s,\tau}^{IBES\_NZ}$, $D_{i,r,s,\tau}^{transition\_NZ}$ and $D_{i,r,s,\tau}^{NZ}$. To the extent that output growth at time τ in the scenario under review differs from that in the baseline scenario, differing dividend growth rates are accordingly accounted for. For the period following 2100 in the Paris-aligned scenario, it is assumed that dividends continue to grow at the rate last projected in this scenario for sector s and/or the GDP $g_{r,s,2100}^{Y,NZ}$ in region r, plus the inflation assumption.

Similarly, short-term dividend expectations $D_{i,\tau}^{IBES}$ taken from analyst surveys, which are assumed to be already priced in, are likely to be revised in a more ambitious climate policy scenario. In the valuation approach presented here, an adjustment is carried out for the growth differential in economic output ($g_{r,s,\tau}^{Y_{NZ}} - g_{r,s,\tau}^{Y_{base}}$) at time τ between the scenario under review and the baseline scenario. It is thus assumed that short-term dividends $D_{i,r,s,\tau}^{IBES\_NZ}$ do not grow at rate $g_{i,\tau}^{IBES}$ but instead at the adjusted rate $g_{i,r,s,\tau}^{IBES\_NZ}$:

(5) $D_{i,r,s,\tau}^{IBES\_NZ} = D_{i,r,s,\tau-1}^{IBES\_NZ}(1 + g_{i,r,s,\tau}^{IBES\_NZ})$.

This rate is calculated as the sum of $g_{i,\tau}^{IBES}$ and the aforementioned growth differential:

(6) $g_{i,r,s,\tau}^{IBES\_NZ} = g_{i,\tau}^{IBES} + (g_{r,s,\tau}^{Y_{NZ}} - g_{r,s,\tau}^{Y_{base}})$.

If the company's business is in one of the aforementioned energy sectors or the steel or cement industry, $g_{r,s,\tau}^{Y_{NZ}}$ reflects the sectoral production growth rather than GDP growth.

Scenario-based calculation of value based on a dividend discount approach

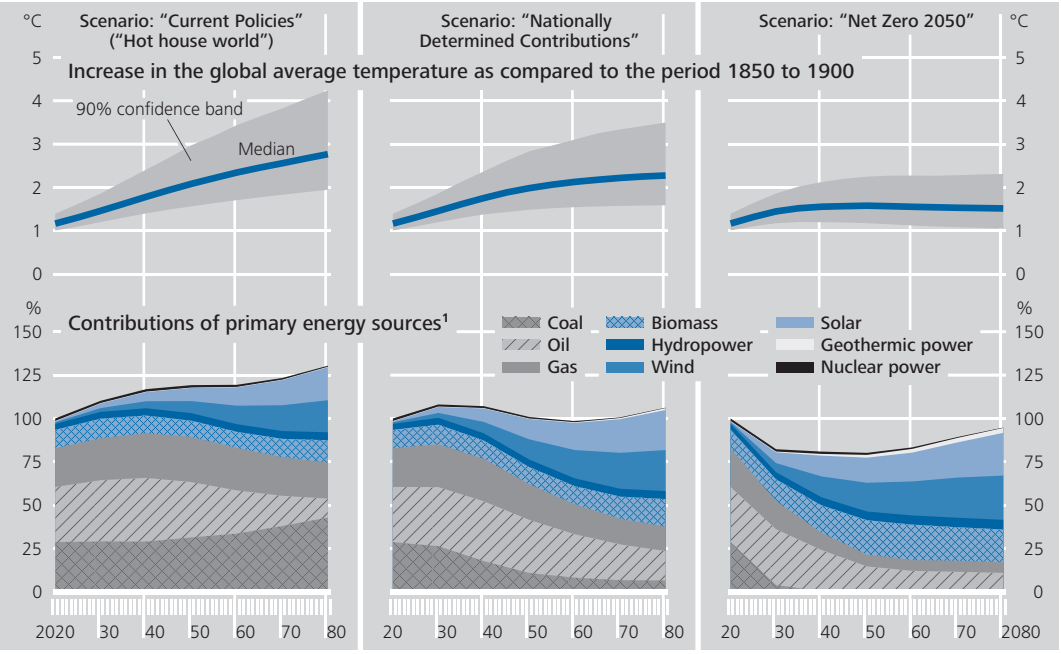
horizons. The focus here lies on the change in the value of individual firms as a result of the switch, outlined above, in market participants' expectations regarding climate policy. The company's equity price as at the base date (here: end-2020) is used as its reference value. This is assumed to correspond to the present value of the future dividend flows if the end-of-2020 pledges (Nationally Determined Contributions) are implemented. This share price is put in relation to the company's equity value if the "Net Zero 2050" scenario is implemented. The price impact indicator analysed here describes the difference between these two figures. Such a measure of the difference in value between scenarios is likely to be relevant to investors, too, when quantifying potential price adjustments for individual companies or the risk of a stranding of assets (see also the box on pp. 70 ff.).

For this indicator to be calculated for every stock corporation, several assumptions must initially be made. It is assumed, for instance, that companies are able to substitute energy sources in line with the production technology pathway projected in the REMIND-MAgPIE model and switch to environmentally friendly technologies for their energy usage.[22] Ultimately, greenhouse gas emissions can be perceived as the result of a cost-driven energy choice made by the representative firm. As CO_2 prices rise, firms will tend to replace increasingly expensive emissions-intensive energy sources with lower-emissions alternatives. Put simply, companies' optimisation calculus will be to decarbonise as long as the firm-specific cost of avoiding the last tonne of carbon emissions is lower than the CO_2 price.

Assumption regarding production technology and elasticities of substitution …

22 For the gross domestic product of each region, this model assumes a (nested CES) production function with constant substitution elasticities, with energy as a factor of production consisting of inputs from the buildings, industry and transport sectors. These are, in turn, dependent on their own elasticities of substitution between individual fossil and non-fossil energy sources.

Temperature pathways and contributions of primary energy sources



Sources: Potsdam Institute for Climate Impact Research (REMIND-MAgPIE) and Bundesbank calculations. **1** 100% equates to global primary energy production in 2020 (560 exajoules). In the study of Baltzer, Bertram, Hilaire, Johnston and Weth (forthcoming) referenced here, the contributions of the primary energy sources serve as an indicator to capture the output and dividend growth of companies that depend on the respective primary energy sources. The contributions of the primary energy sources are based on the direct equivalence method, where a unit of secondary energy from non-fossil sources equates to a unit of primary energy. This method is used in studies on long-term scenarios, including several IPCC reports.

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.. and the dividend path

A further assumption relates to the expected dividend path. The approach chosen in this analysis takes account of short-term firm-specific dividend expectations gleaned from surveys as well as long-term gross dividend expectations, which are assumed to evolve in line with modelled economic output. The estimated cost of the company's direct greenhouse gas emissions is deducted from these long-term gross dividends[23] to yield a net dividend path.

Assumptions on the region

The present analysis assumes that region-specific progress in reducing the intensity of emissions is reflected at the company level. The companies studied in this analysis are domiciled in 75 countries from various regions of the world, where their businesses are subject to the prevailing national climate policies. In order to calculate the indicator, it is assumed that the companies work under the regional circumstances presumed in the REMIND-MAgPIE model. A company is assigned to one of the twelve regions based on where the parent company is headquartered. It is thus assumed, for simplicity, that this firm's greenhouse gas emissions will also all take place in the region in which the company is headquartered.

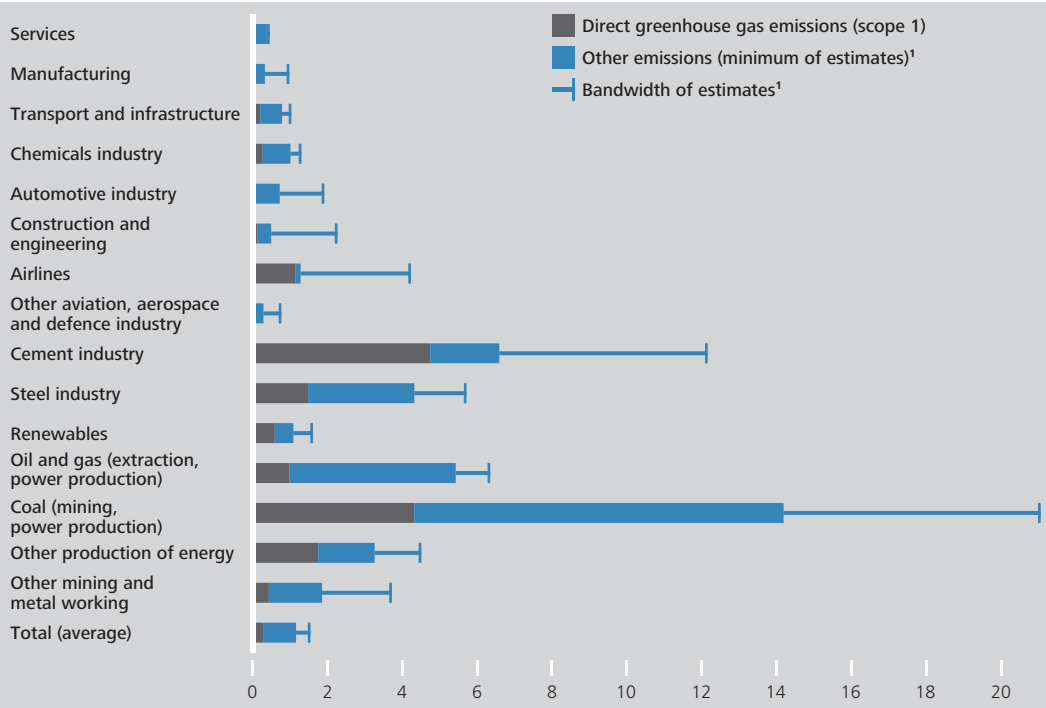
Assumptions on cost pass-through

Finally, the baseline scenario assumes that companies are not, or only partially, able to pass on higher CO_2 prices to consumers. In order to quantify the bandwidth of potential effects, this analysis differentiates between two cases: first, the case without cost pass-through and, second, the case with an 80% pass-through. In the first case, any emissions costs incurred will reduce profits and consequently dividends as well. If the cost of emissions is already reflected in dividend expectations in the baseline scen-

23 The required firm-specific emissions pathway starts with the company's current (reported or estimated) emissions and is assumed to evolve in line with scenario-specific decarbonisation. The company's future cost pattern is determined by developments in CO_2 prices as well as the growth rates of the modelled emissions. Progress in reducing emissions intensity (see the chart on p. 68) is consequently imposed for the companies under review.

Sectoral emissions intensities*

Thousands of tonnes of CO_2 equivalents per €1 million in revenues



Sources: ISS-ESG, Trucost, Thomson Reuters and Bundesbank calculations. * A total of 5,285 stock corporations are analysed. Sector averages calculated based on unweighted company-specific emissions intensities. **1** Bandwidth of estimates supplied by data providers ISS-ESG and Trucost for indirect greenhouse gas emissions (scope 2) and emissions relating to the product or supply chain (scope 3).

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ario, only that percentage of the costs that exceeds the costs in the baseline scenario will have to be deducted from dividends in the "Net Zero 2050" scenario.

Ultimately, two factors determine the company's net dividend path: the deviation of the output paths from the baseline scenario and the incremental emissions-related costs as a result of the remaining emissions (see the box on pp. 70 ff.). Depending on data availability, the net dividend paths also reflect the degree to which companies generate revenues from the sale of fossil energy sources or electricity produced from such sources.[24]

Firm-specific discounting of dividends

If the scenario-specific net dividends are discounted using the same interest rate (in this case, a firm-specific interest rate) as in the baseline scenario, valuation effects can be derived by comparing the resulting present value with the actual equity price. We determine this present value based on the firm-specific implied cost of capital, as required by investors at the base date using the baseline scenario and the equity price at that date. The resulting firm-specific changes in value are subsequently aggregated and evaluated at the sectoral and macroeconomic level.[25]

Data

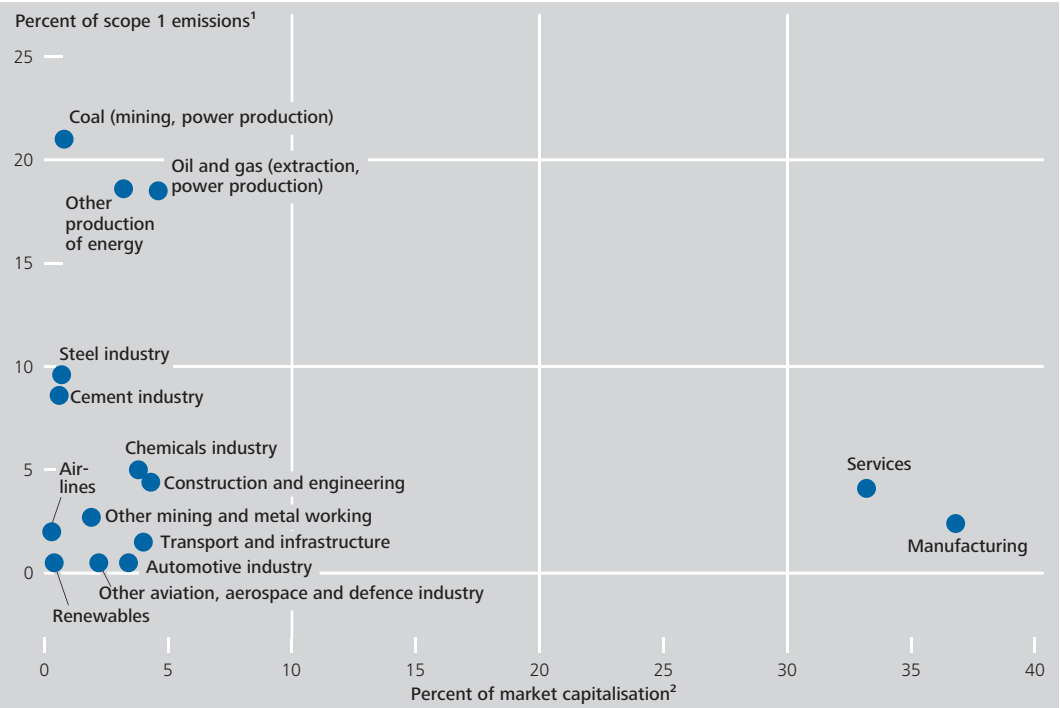
The present analysis covers 5,285 stock corporations worldwide

A useful guideline when measuring companies' greenhouse gas emissions is represented by the classification standards used in the Greenhouse Gas Protocol.[26] According to this protocol, dir-

24 The projected growth of companies' energy source-specific revenues are, in turn, based on the scenario-dependent contributions of individual energy sources to the total primary energy production in the region that includes the country in which the company is headquartered. For the globally aggregated contributions to primary energy production, see the chart on p. 73.
25 This path is taken based on the method used by Baltzer et al. (2022) (forthcoming).
26 For more on the Greenhouse Gas Protocol, see World Resources Institute (2004) and https://ghgprotocol.org/

Sector contributions to greenhouse gas emissions and stock market capitalisation*

%



Sources: ISS-ESG, Thomson Reuters and Bundesbank calculations. * The analysis covers a total of 5,285 stock corporations. **1** 100% represents these companies' total direct greenhouse gas emissions (scope 1 emissions for 2019) in the amount of 9.4 gigatonnes of CO_2 equivalents. **2** 100% of these companies' stock market capitalisation is equal to €44.6 trillion (end-2020).

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ect emissions (known as scope 1 emissions) from the production process or the services the company provides are distinct from indirect emissions (scope 2) that come about as a result of the purchase of electricity or heat. A further distinction (scope 3) covers emissions from upstream and downstream stages of the supply chain or in connection with the use of the product.

Firm-specific data on greenhouse gas emissions are provided by various suppliers that base their information on company reports or estimations. On this basis and using additional data at the firm level, the above-mentioned price impact indicator is calculated for a total of 5,285 non-financial stock corporations from 75 countries. These companies account for more than half of global stock market capitalisation. The percentage of direct greenhouse gas emissions they represent amounts to between 17% (9.4 billion tonnes of CO_2 equivalents) and 20% (10.5 billion tonnes) of total global emissions, depending on the data supplier. The following analyses are based on information gleaned from company reports and estimates provided by ISS-ESG, which supplies emissions data for all the companies observed here.

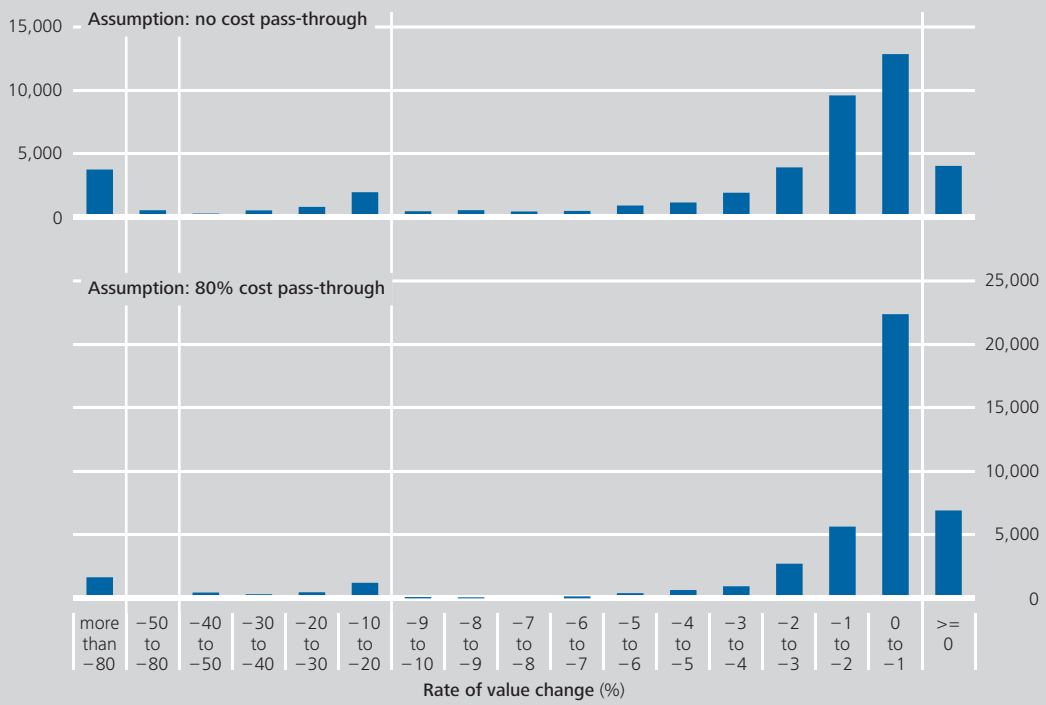
The chart on p. 74 depicts average emissions intensities for individual sectors (greenhouse gas emissions in 1,000 tonnes of CO_2 equivalents per €1 million in revenues). It shows, first, direct emissions (scope 1) as reported by the companies or estimated by ISS-ESG. Second, it depicts the bandwidth of sector averages of the intensities of indirect emissions (scope 2) and product or supply chain-related emissions (scope 3) based on estimates provided by two data suppliers. In most sectors, this imprecision in terms of these emissions is considerable.

Definition of the greenhouse gas emissions analysed

When constructing the price impact indicator presented here, only direct greenhouse gas emissions (scope 1) as at the base date are

Distribution of stock corporations' valuation effects*

Share capital in € bn (end-2020)



Sources: ISS-ESG, Thomson Reuters, Potsdam Institute for Climate Impact Research (REMIND-MAgPIE) and Bundesbank calculations.
* Assumption: Paris-aligned decarbonisation of companies (scenario: "Net Zero 2050", baseline scenario: "Nationally Determined Contributions").
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used. That means that the focus lies on that part of companies' carbon footprint where data reliability is greatest. Another advantage is that direct emissions can be aggregated without double counting.[27]

Importance of sectors in terms of greenhouse gas emissions and market capitalisation

Weighting of companies by stock market capitalisation and greenhouse gas emissions often diverge

In many cases, the size of a firm's carbon footprint as measured by direct greenhouse gas emissions does not reflect its importance in financial markets (see the chart on p. 75). Looking ahead to the results, that means that losses that depend on the level of emissions have a massive impact on part of equities, but this part is fairly small in relation to total stock market capitalisation. This applies to companies in the coal, gas and oil industry, for instance, as well as to other energy industry companies and companies in the cement and steel industries.

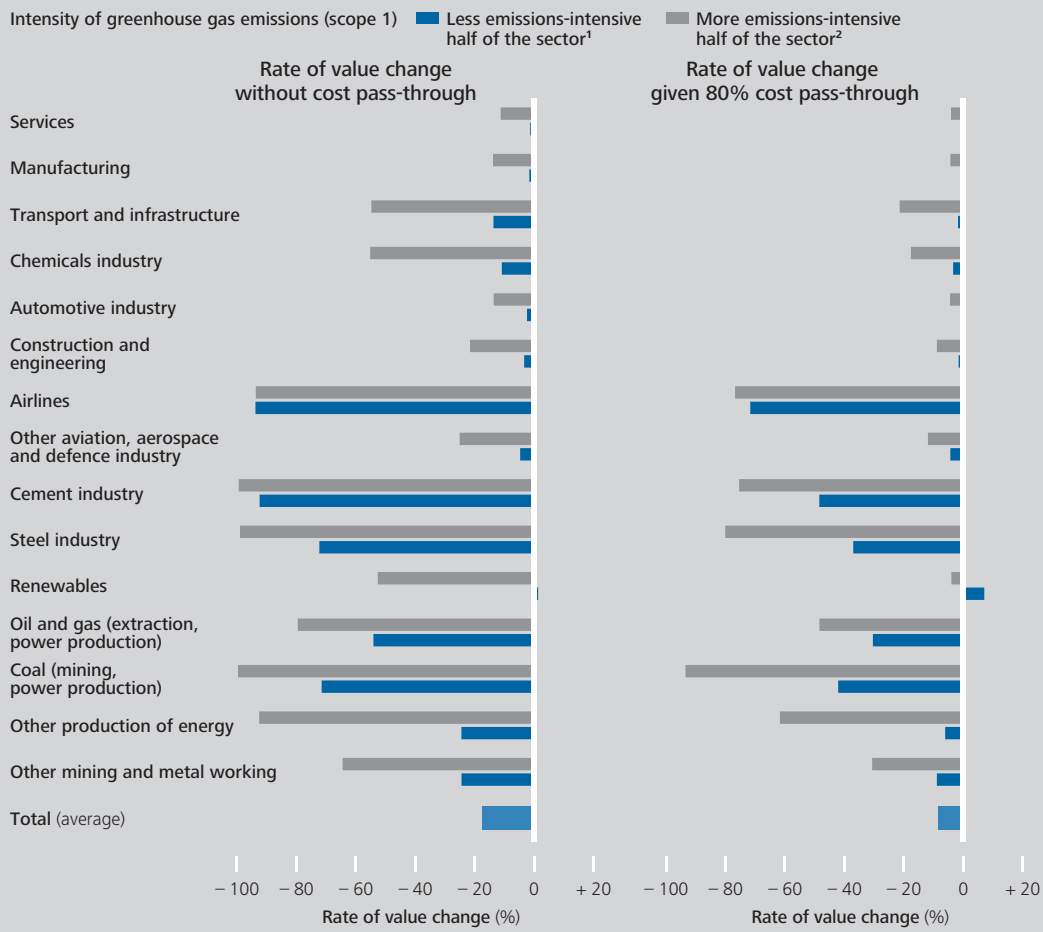
Companies assigned to energy sectors based on percentage of revenues from energy sources

A subset of 502 stock corporations can be assigned to the above-listed energy sectors based on available information on the revenue share generated from the respective energy source (source: ISS-ESG). If, say, the extraction of coal or the production of electricity from coal accounted for more than 50% of revenues in 2019, then that company is assigned to the coal sector. The same is done for companies whose business models are tied to other fossil or non-fossil energy sources, where companies active in the oil and gas business and companies focusing on renewables are aggregated in each case.

The companies assigned to the sectors listed above emit direct emissions totalling 7.5 gigatonnes of CO_2 equivalents, accounting for around 80% of all the company emissions

27 Double counting would occur, for instance, if an electricity supplier's direct emissions and an electricity user's indirect emissions were added together.

Emissions-related price impact indicator in a sectoral breakdown*



Sources: ISS-ESG, Thomson Reuters, Potsdam Institute for Climate Impact Research (REMIND-MAgPIE) and Bundesbank calculations. * Unweighted sectoral averages of value change rates are calculated for a total of 5,285 stock corporations. Sector allocations are made based on information contained in the NACE and GICS classification systems. In some cases, companies were, as an exception to this rule, allocated to the sectors Coal, Oil and gas as well as Renewables if extraction of or energy generation using the respective primary energy source accounts for more than 50% of the enterprise's total revenues according to ISS-ESG. **1** Includes all companies allocated to the respective sector whose scope 1 emissions intensity is smaller or equal to the sector median. **2** Includes all companies allocated to the respective sector whose scope 1 emissions intensity is greater than the sector median.

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under review. By comparison, their weight in the total stock market capitalisation under observation is small, at €4.7 trillion, or just under 10%. Low-emissions companies in manufacturing and the services sector account for the largest share of market capitalisation, at around €16 trillion each.

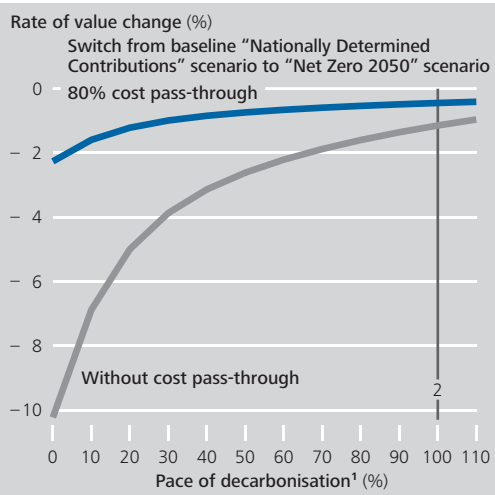
Results

Distribution of valuation effects

As described in the box on pp. 70 ff., shifts in the value of the companies under analysis are expressed as the scenario-based present value changes of the shares in relation to the actual share price. In total, 5,285 stock corporations are valued relative to their share price at the end of 2020 and the dividend expectations at this point in time. These valuation effects can be presented in the form of a loss distribution. The chart on p. 76 shows – broken down by degree of cost pass-through – for certain intervals in the rates of value change the sum of the respective market capitalisation attributable to them (before the valuation change, as of end-2020).

The case of a Paris-aligned decarbonisation with correspondingly high CO_2 prices shows that, given full pass-through of the incremental

Emissions-related price impact indicator for a fictitious company*



Sources: Potsdam Institute for Climate Impact Research (REMIND-MAgPIE) and Bundesbank calculations. * Assumptions: Fictitious European stock corporation with an assumed return on equity of 8.5% and dividends (2021) in relation to direct greenhouse gas emissions (2019) of €1.70 per kg of emitted CO_2 equivalents. **1** Company decarbonisation relative to the emissions pathway in the "Net Zero 2050" scenario: 100% represents a proportional (Paris-aligned) decarbonisation, 0% represents the locus where companies' emissions remain unchanged at their 2019 level. **2** Cut-off at 100%: the present analysis looks at reductions in emissions in line with the "Net Zero 2050" scenario.

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costs from direct greenhouse gas emissions, shares to the tune of just over €35 trillion (or 78% of the total market capitalisation under observation) are left unscathed by emissions-related share price losses of more than 4%. At the same time, however, more than one-tenth of the total market capitalisation (€4.7 trillion) suffers losses of more than one-half of company values as a result of higher emissions costs and deviating value added paths.

Assuming instead a cost pass-through of 80%, share price losses are limited to less than 4% for 87% of market capitalisation (€38.6 trillion). At the same time, shares to the tune of €1.9 trillion suffer losses of more than 50%.

The price impact indicator calculated at the company level can be aggregated for individual sectors. In the chart on p. 77, each analysed sector is split into a more emissions-intensive and a less emissions-intensive half of companies. For each of these halves, unweighted loss ratios (in negative territory) are determined. Positive average value changes are not fundamentally out of range, though; they do occur in some cases for renewables.

It is evident that emissions intensity is one of the factors that determine the size of the valuation effect. The "greener half" is associated with smaller value losses for the stocks under observation. However, in several sectors, this relationship is overlain by the influence of deviating value added paths.

A theoretical example

The price impact indicator presented here is sensitive to changes in individual assumptions. The results outlined so far are limited to the case where all companies reduce their emissions in line with the "Net Zero 2050" scenario. This Paris-aligned response of emissions is depicted using a cut-off point at 100% in the adjacent chart.[28] This chart exemplifies, for a notional company, the sensitivity of the price impact indicator to the percentage of emissions costs that can be passed through and as a function of the pace of decarbonisation relative to the scenario pathway.

While the results explained above refer to a case in which the companies adapt their energy mix in line with the substitution elasticities used in the REMIND-MAgPIE model and decarbonise correspondingly (in a Paris-aligned manner), individual companies might reduce their emissions to different degrees. As explained (see p. 72), the individual pace of decarbonisation is likely to depend on both the expected CO_2 price pathway and on the individual cost of avoiding emissions. If, meanwhile, the focus lies exclusively on emissions costs arising under the price projections in the Paris-aligned scenario, it is clear that value losses are higher the slower the pace of decarbonisation.

28 Paris-aligned decarbonisation is taken to mean that the company's emissions develop in line with the emissions in the "Net Zero 2050" scenario.

Scenario-based value indicator for transition risk: quantifying stranding

Definition of stranding in this approach

The valuation approach presented here can be used to derive not only an emissions-related price effect, but also a measure for company "stranding". In what follows, this is defined as the case where, after taking into account deviating value added paths, the incremental costs of emissions will exceed the expected or projected gross dividends as of a certain future point in time.

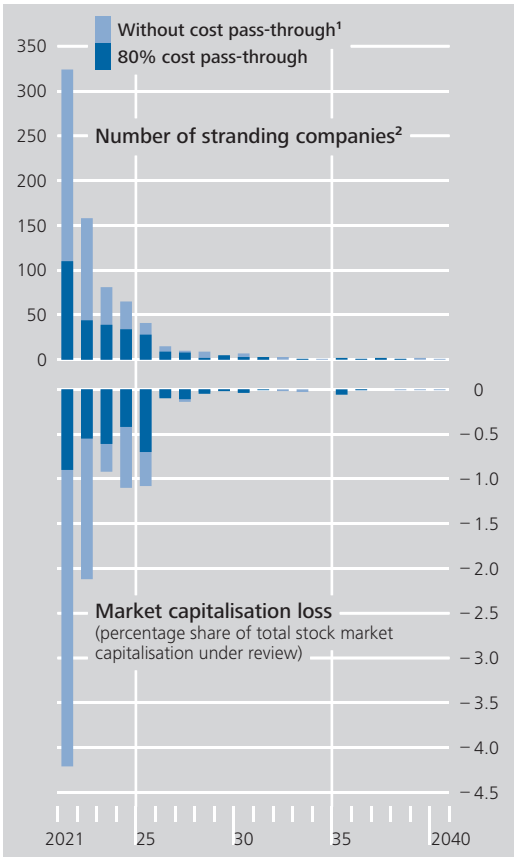
Distribution of stranding over time

This definition can be applied to the companies under review in the Paris-aligned scenario. The adjacent chart illustrates that the vast majority of stranding, both as measured by the number of companies and by their stock market capitalisation (end-2020), occurs in the five years to 2025. This is also true if 80% of the incremental costs of greenhouse gas emissions can be passed through, although this assumption sees a somewhat larger percentage of companies stranding in the years after 2025 than is the case if the company has to bear all emissions-related costs.

Stranding in a sectoral perspective

Stranding stock market capitalisation can also be shown at the sector level. The table on p. 80 indicates that even given decarbonisation in line with the Paris-aligned "Net Zero 2050" scenario, the incremental costs from the remaining emissions and deviating output pathways can leave several sectors hard hit. This is particularly true if no cost pass-through is possible. Unsurprisingly, particularly badly affected sectors include the carbon-intensive cement and steel sectors as well as companies whose business centres on fossil energy sources – driven in part by projected sectoral output trajectories. According to the calculations, stranding stock market capitalisation amounts to €4.4 trillion without cost pass-through and €1.7 trillion with 80% cost pass-through. Leaving aside stranding and taking into account all 5,285 stock corporations under review, the aggregate capitalisation-weighted loss ratio amounts to 12.4% (without pass-through) and 6.0% (with 80% pass-through).

Stranding companies and losses in market capitalisation under a Paris-aligned decarbonisation*



Sources: ISS-ESG, Thomson Reuters, Potsdam Institute for Climate Impact Research (REMIND-MAgPIE) and Bundesbank calculations. * Scenario: "Net Zero 2050". **1** Pass-through of incremental emissions-related costs to the clients of the companies under review. **2** The stranding of a company is defined here as the point in time at which the expected dividends no longer cover the incremental emissions-related costs which cannot be passed on to the company's clients.
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Constraints

Measurement uncertainties …

One constraint to consider is that the price impact indicator presented here does exhibit some measurement imprecision. The starting point for the quantification carried out in this article is that, first, market participants currently expect the "Nationally Determined Contributions" scenario to be implemented.

Stranding stock market capitalisation by sector

Scenario: "Net Zero 2050", baseline scenario: "Nationally Determined Contributions"

Sector	Losses in stock market capitalisation caused by stranding[1]			
	Absolute, in € billion		As a percentage of respective (sector-specific) market capitalisation	
	Without cost pass-through[2]	80% cost pass-through[2]	Without cost pass-through[2]	80% cost pass-through[2]
Services	– 300	– 68	1.9	0.4
Manufacturing	– 127	– 19	0.8	0.1
Transport and infrastructure	– 211	– 67	26.7	8.4
Chemicals industry	– 392	– 54	23.3	3.2
Automotive industry	– 9	– 2	0.6	0.1
Construction and engineering	– 64	– 16	3.4	0.8
Airlines	– 111	– 98	98.4	86.9
Other aviation, aerospace and defence industry	– 137	– 66	13.2	6.3
Cement industry	– 245	– 157	97.7	62.7
Steel industry	– 236	– 145	71.4	44.3
Renewables	– 30	0	17.1	0.0
Oil and gas (extraction, power production)	– 1,256	– 246	61.6	12.1
Coal (mining, power production)	– 190	– 146	54.3	41.6
Other production of energy	– 901	– 491	62.7	34.1
Other mining and metal working	– 191	– 79	23.0	9.5
Total	– 4,401	– 1,653	9.9	3.7

Sources: ISS-EEG, Thomson Reuters, Potsdam Institute for Climate Impact Research (REMIND-MAgPIE) and Bundesbank calculations. **1** Stranding is defined here as a case in which, at a future point in time, the incremental emissions-related costs exceed the projected gross dividends. **2** Cost pass-through is understood as the incremental emissions-related costs being passed on to the companies' clients.

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… in the formation of expectations

This assumption is supported by indications in the empirical findings that greenhouse gas-related risks are already reflected in financial markets to a certain extent.[29] It cannot be ruled out, however, that markets assume these commitments will not be honoured in some regions of the world. If, for example, one were to choose a less optimistic "Current Policies" scenario as the baseline scenario (see the charts on pp. 66 and 68), the value adjustments resulting from a flipover to a "Net Zero 2050" scenario would be more significant still. Second, another factor to consider alongside this imprecision is that the price impact indicator assumes a shift in expectations towards a Paris-aligned scenario. As is usual in scenario analyses, it is silent on whether, or with what probability, this will happen at the global level. When interpreting the price impact indicator, it should furthermore be considered that the future (global) climate policy stance is subject to a high degree of uncertainty. This uncertainty also has a knock-on effect on market participants' expectations formation about the future CO_2 price pathway.

Model uncertainty surrounding technologies, substitution elasticities and emissions avoidance costs, …

There is also uncertainty about how flexibly economic agents will respond to a rise in CO_2 prices and whether the substitutability among energy sources assumed in the REMIND-MAgPIE model and the assumption of technological learning adequately captures their behaviour. In particular, no data are available on individual companies' current and future emissions avoidance costs, which, along with the CO_2 price, will determine the decision to decarbonise. This means the question of decarbonising certain production processes also remains subject to uncertainty.

Basing the regional allocation of companies' greenhouse gas emissions on the country in which the parent company is headquartered is

29 See, for example, Bolton and Kacperczyk (2021) or Görgen et al. (2019).

… the country in which the company is headquartered …

another source of inaccuracy. This means, for example, that manufacturing sites of companies which produce worldwide but are headquartered in Europe are assigned in their entirety to Europe and subject to the projected European CO_2 prices.

… and the scope for pass-through

The resulting valuation effects are, moreover, very much determined by the extent to which emissions costs can be passed on. The scope for companies to pass through costs depends on their competitive position in sales markets, say. Where a company has sufficient market power, it can, in extreme cases, avoid the burden of emissions costs altogether. If, however, producers of intermediate goods manage to pass the attendant emissions costs through to a (downstream) company, the latter might, depending on its competitive position, face costs beyond those associated with its own direct emissions.

Valuation effects possibly overstated due to CO_2 hedging

Another source of imprecision in the indicator of the financial implications of higher CO_2 pricing comes from the extent to which companies have frontloaded the costs of foreseeable emissions as protection against mounting emission costs over the coming years.[30] If a company has already purchased enough emissions allowances for the coming years, it will not incur any additional emissions costs no matter how tightly emissions rights are capped in this period and how strongly the CO_2 price will rise. Hence, the company will only have an incentive to reduce its greenhouse gas emissions once the hedging period has elapsed. As a result, the valuation effects determined here could overstate the company's actual emissions-related loss in value, provided it already has sufficient emissions allowances. It is therefore in the absence of such hedging strategies that the proposed emissions-related price impact indicator can be understood as a point of reference in terms of a shift towards Paris-aligned CO_2 pricing.

Summary

Quantification of valuation effects due to a shift in climate policy expectations

The present article proposes an approach for quantifying valuation effects resulting from a shift in climate policy expectations. Its focus is on the difference between a scenario based on the implementation of Nationally Determined Contributions (consistent with global warming of 2.4°C) and the scenario of an orderly transition to a Paris-aligned low-carbon economy (consistent with global warming of 1.5°C). This analysis looks at the incremental costs arising from greenhouse gas emissions as well as from scenario-dependent deviations in the output pathways; no other shifts in costs are taken into account. Valuation effects resulting from ongoing physical climate change are disregarded as well.

Valuation method applied for 5,285 stock corporations worldwide

The valuation method selected here is applied for 5,285 stock corporations from all over the world at the firm level. Together, they account for more than half of the global stock market capitalisation and are responsible for 17% to 20% of global greenhouse gas emissions. The potential price adjustment for individual companies as a result of changed expectations is modelled using a multi-stage dividend discount model. This traditional valuation model is calibrated on firm-specific greenhouse gas emissions and scenario data from a multi-regional integrated assessment model (REMIND-MAgPIE), which, amongst other things, models the energy systems in individual regions of the world in detail and allows for temporary regional differences in climate policy.

This scenario-based valuation approach for transition risks is driven by various factors. First of all, the company valuation in the baseline

30 In an emissions trading scheme, frontloading can be perceived as an issuer strategy to purchase emissions allowances when their prices are low in such a quantity that, together with the emissions allowances allocated for free, they are sufficient to cover the expected greenhouse gas emissions in the hedging period. The price of emission allowances in the European Emissions Trading System (ETS) in mid-2017 was still €5 per tonne of CO_2 emitted, compared with around €80 at the end of 2021.

scenario is pivotal. Here, in addition to the equity price and the individual dividend expectations, the respective Nationally Determined Contributions are taken into account. This information is used to compute the firm-specific implied cost of capital, which is one of the decisive factors in the price impact analysis. Moreover, the most significant factor for the majority of companies is the CO_2 price trajectory in their particular region: together with the projected greenhouse gas emissions, this is what determines how the company's emissions costs in a Paris-aligned scenario evolve relative to its emissions costs in the previously defined baseline scenario. These incremental costs lower the projected firm-specific and scenario-specific dividends. In addition, scenario-specific output pathways are incorporated for selected sectors.

Scope for cost pass-through determines bandwidth of potential losses

The cases analysed – first, where 80% of the incremental emissions-related costs are passed through and second, where the company bears all emissions-related costs – serve to estimate the bandwidth of potential losses. It is found that, in the case of a Paris-aligned decarbonisation by the companies, the vast majority of them, along with their stock market capitalisation, are only expected to suffer small losses in value even if CO_2 prices rise strongly. By contrast, considerable losses in value will be sustained by a segment of stock corporations that are responsible for very high greenhouse gas emissions while expected dividends are relatively small by comparison. In addition, companies whose business activities are centred around fossil fuels will be strongly affected; they may face the risk of stranding even if they reduce emissions in compliance with the Paris Agreement.

Changes in value associated with transition risks

The measure presented in this article provides a risk indication for the firm's ability to bear emissions costs under a given scenario. This type of indicator can help to better quantify price adjustments associated with transition risks and the risk of climate-related stranding of certain assets.

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Statistical Section

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I. Key economic data for the euro area

1. Monetary developments and interest rates

	Money stock in various definitions [1,2]				Determinants of the money stock [1]			Interest rates		
			M3 [3]							
	M1	M2		3-month moving average (centred)	MFI lending, total	MFI lending to enterprises and households	Monetary capital formation [4]	EONIA [5,7]	3 month EURIBOR [6,7]	Yield on European government bonds outstanding [8]
Period	Annual percentage change							% p.a. as a monthly average		
2020 Apr.	11.8	8.3	8.1	8.2	4.8	4.3	0.0	– 0.45	– 0.25	0.3
May	12.6	9.1	8.9	8.7	6.1	4.9	0.2	– 0.46	– 0.27	0.2
June	12.8	9.3	9.2	9.4	6.9	4.6	– 0.5	– 0.46	– 0.38	0.1
July	13.6	10.1	10.0	9.6	7.4	4.7	– 0.5	– 0.46	– 0.44	0.0
Aug.	13.3	9.6	9.5	9.9	7.7	4.7	– 0.1	– 0.47	– 0.48	– 0.0
Sep.	13.8	10.3	10.3	10.1	8.2	4.5	– 0.4	– 0.47	– 0.49	– 0.1
Oct.	13.9	10.4	10.4	10.6	8.3	4.3	– 0.5	– 0.47	– 0.51	– 0.2
Nov.	14.5	10.8	10.9	11.2	8.6	4.4	– 0.7	– 0.47	– 0.52	– 0.2
Dec.	15.6	11.7	12.2	11.9	9.3	5.0	– 0.5	– 0.47	– 0.54	– 0.2
2021 Jan.	16.4	12.2	12.5	12.3	9.4	4.8	– 0.9	– 0.48	– 0.55	– 0.2
Feb.	16.4	12.1	12.3	11.6	9.6	4.7	– 0.9	– 0.48	– 0.54	– 0.1
Mar.	13.7	10.2	10.1	10.6	8.6	4.0	– 0.3	– 0.48	– 0.54	0.0
Apr.	12.4	9.2	9.4	9.4	7.3	3.4	– 0.3	– 0.48	– 0.54	0.1
May	11.7	8.4	8.6	8.8	6.3	2.9	– 1.0	– 0.48	– 0.54	0.2
June	11.8	8.3	8.4	8.3	6.0	3.3	– 0.6	– 0.48	– 0.54	0.2
July	11.0	7.6	7.8	8.1	5.8	3.1	– 0.5	– 0.48	– 0.55	0.0
Aug.	11.0	7.8	8.0	7.8	5.5	2.8	– 0.8	– 0.48	– 0.55	– 0.1
Sep.	11.1	7.6	7.6	7.8	5.6	3.4	– 0.7	– 0.49	– 0.55	0.1
Oct.	10.7	7.5	7.7	7.5	5.6	3.6	– 0.3	– 0.49	– 0.55	0.2
Nov.	9.9	7.0	7.3	...	5.9	3.8	– 0.5	– 0.49	– 0.57	0.2
Dec.	...	...	...	...	...	...	...	– 0.49	– 0.58	0.1

1 Source: ECB. **2** Seasonally adjusted. **3** Excluding money market fund shares/units, money market paper and debt securities with a maturity of up to two years held by non-euro area residents. **4** Longer-term liabilities to euro area non-MFIs. **5** Euro overnight index average. **6** Euro interbank offered rate. **7** See also footnotes to Table VI.4, p. 43•. **8** GDP-weighted yield on ten-year government bonds. Countries included: DE, FR, NL, BE, AT, FI, IE, PT, ES, IT, GR, SK, CY, SI.

2. External transactions and positions *

	Selected items of the euro area balance of payments [r]								Euro exchange rates [1]		
	Current account		Financial account							Effective exchange rate [3]	
	Balance	of which: Goods	Balance	Direct investment	Portfolio investment	Financial derivatives [2]	Other investment	Reserve assets	Dollar rate	Nominal	Real [4]
Period	€ million								EUR 1 = USD ...	Q1 1999 = 100	
2020 Apr.	+ 11,457	+ 11,792	– 18,918	– 31,372	+ 152,422	+ 12,905	– 154,567	+ 1,694	1.0862	98.1	92.5
May	– 1,354	+ 16,641	– 11,139	– 49,799	+ 33,541	+ 8,840	– 5,383	+ 1,662	1.0902	98.3	92.6
June	+ 16,845	+ 27,683	+ 30,327	– 40,288	– 41,664	+ 20,438	+ 92,011	– 170	1.1255	99.7	93.8
July	+ 28,197	+ 35,469	+ 16,605	+ 49,125	– 29,375	– 5,833	+ 3,246	– 558	1.1463	100.4	94.4
Aug.	+ 24,965	+ 24,407	+ 52,848	+ 14,351	+ 35,481	– 15,708	+ 17,420	+ 1,304	1.1828	101.5	94.9
Sep.	+ 37,576	+ 34,895	+ 50,431	– 22,555	+ 3,082	– 9,747	+ 77,062	+ 2,589	1.1792	101.5	94.8
Oct.	+ 30,862	+ 38,834	+ 46,064	+ 41,904	+ 101,009	+ 4,317	– 104,080	+ 2,914	1.1775	101.3	94.6
Nov.	+ 27,529	+ 34,937	+ 49,240	– 37,814	+ 185,183	+ 11,041	– 106,561	– 2,610	1.1838	100.6	94.1
Dec.	+ 42,311	+ 38,682	+ 33,797	– 108,628	+ 287,644	– 29,887	– 117,081	+ 1,749	1.2170	101.8	95.1
2021 Jan.	+ 15,582	+ 21,486	+ 46,394	+ 51,009	+ 9,647	+ 12,510	– 25,840	– 933	1.2171	101.3	95.3
Feb.	+ 21,755	+ 33,110	+ 46,913	+ 38,741	+ 84,641	– 1,219	– 73,629	– 1,621	1.2098	100.6	94.5
Mar.	+ 37,439	+ 36,897	+ 5,126	+ 19,132	– 6,472	– 5,311	– 1,685	– 538	1.1899	100.3	94.1
Apr.	+ 32,472	+ 28,323	+ 23,744	+ 14,106	+ 33,051	+ 1,931	– 25,974	+ 630	1.1979	100.6	94.2
May	+ 14,424	+ 26,982	+ 33,002	+ 3,892	+ 87,992	– 4,581	– 55,639	+ 1,337	1.2146	100.8	94.3
June	+ 21,639	+ 29,899	+ 31,016	– 26,805	+ 48,086	+ 3,671	+ 1,578	+ 4,487	1.2047	100.2	93.7
July	+ 38,673	+ 32,926	+ 37,748	+ 61,366	– 20,559	+ 21,709	– 24,430	– 338	1.1822	99.7	93.5
Aug.	+ 18,016	+ 15,597	+ 11,339	+ 44,590	+ 23,290	– 8,292	– 170,136	+ 121,887	1.1772	99.3	93.2
Sep.	+ 32,776	+ 21,853	+ 32,197	+ 21,239	+ 50,036	+ 718	– 40,626	+ 830	1.1770	99.4	93.2
Oct.	+ 20,519	+ 17,821	+ 9,837	+ 18,623	+ 20,208	+ 4,966	– 37,119	+ 3,159	1.1601	98.4 p	92.3
Nov.	...	...	...	...	...	...	...	...	1.1414	97.6 p	91.6
Dec.	...	...	...	...	...	...	...	...	1.1304	97.1 p	91.2

***** Source: ECB, according to the international standards of the International Monetary Fund's Balance of Payments Manual (sixth edition). **1** Monthly averages, see also Tables XII.10 and 11, pp. 82•/ 83•. **2** Including employee stock options. **3** Bundesbank calculation. Against the currencies of the EER-19 group. **4** Based on consumer price indices.

I. Key economic data for the euro area

3. General economic indicators

Period	Euro area	Belgium	Germany	Estonia	Finland	France	Greece	Ireland	Italy	Latvia
Real gross domestic product [1] Annual percentage change										
2019	1.6	2.1	1.1	4.1	1.2	1.8	1.8	4.9	0.4	2.5
2020	− 6.4	− 5.7	− 4.6	− 3.0	− 2.8	− 7.9	− 9.0	5.9	− 8.9	− 3.6
2021	...	...	2.7	...	...	...	...	...	...	...
2020 Q2	− 14.5	− 13.2	− 11.3	− 7.3	− 7.3	− 18.7	− 16.3	1.4	− 18.2	− 8.9
Q3	− 4.0	− 3.6	− 3.6	− 2.8	− 2.9	− 3.8	− 10.2	10.8	− 5.4	− 2.4
Q4	− 4.4	− 4.3	− 1.9	− 1.5	− 0.9	− 3.7	− 7.1	4.5	− 6.2	− 1.2
2021 Q1	− 1.1	0.0	− 3.2	4.1	− 1.7	1.7	− 1.8	11.7	0.3	− 0.7
Q2	14.4	15.1	10.4	13.0	8.5	19.2	16.6	21.1	17.9	10.8
Q3	3.9	5.0	2.5	8.6	4.0	3.4	13.7	11.4	4.1	5.2
Industrial production [2] Annual percentage change										
2018	0.8	1.2	1.0	4.8	3.4	0.6	1.8	− 4.9	0.9	2.0
2019	− 1.1	4.8	− 4.3	7.1	1.6	0.5	− 0.7	7.0	− 1.1	0.8
2020	− 7.9	− 3.8	− 10.2	− 5.5	− 3.1	− 10.9	− 2.1	14.5	− 11.4	− 1.8
2020 Q2	− 19.5	− 11.7	− 21.6	− 13.1	− 5.4	− 23.8	− 8.2	10.3	− 25.5	− 5.1
Q3	− 6.1	− 3.5	− 10.0	− 2.4	− 4.8	− 7.8	− 2.0	9.1	− 5.2	− 1.8
Q4	− 0.5	0.6	− 2.9	0.2	− 1.9	− 4.2	3.1	25.0	− 2.5	2.2
2021 Q1	4.7	8.4	− 1.2	− 1.7	0.1	2.4	4.7	40.6	9.9	3.6
Q2	23.1	29.8	19.2	14.4	4.5	22.3	15.6	33.2	31.9	12.6
Q3	6.1	19.4	p 2.8	7.1	4.8	3.1	9.5	27.6	4.4	6.3
Capacity utilisation in industry [3] As a percentage of full capacity										
2019	82.3	81.2	84.5	72.8	81.1	84.5	71.5	77.3	77.4	76.3
2020	74.4	75.5	77.0	67.4	76.8	73.5	70.8	68.5	53.1	71.8
2021	81.3	79.9	84.8	77.9	81.2	80.8	75.6	78.0	76.2	75.0
2020 Q3	72.1	73.4	74.4	66.0	76.0	72.9	70.3	69.6	64.5	70.8
Q4	76.3	75.9	79.1	69.6	75.4	76.0	73.2	72.0	71.4	72.7
2021 Q1	77.5	77.4	80.4	71.6	78.1	77.1	72.5	74.5	72.8	73.1
Q2	82.5	80.2	86.7	76.5	81.0	82.8	74.7	77.2	75.7	75.0
Q3	83.0	81.3	87.0	78.8	82.5	82.0	77.8	79.7	78.8	75.4
Q4	82.1	80.7	85.1	84.6	83.0	81.2	77.3	80.4	77.3	76.6
Standardised unemployment rate [4] As a percentage of civilian labour force										
2019	7.5	5.4	3.2	4.5	6.7	8.2	17.3	5.0	10.0	6.3
2020	7.8	5.6	3.8	6.8	7.8	7.8	16.3	5.6	9.2	8.1
2021	...	...	...	...	...	...	...	e 6.3	...	...
2021 July	7.6	6.2	p 3.4	6.4	7.7	8.0	14.0	5.8	p 9.2	7.7
Aug.	7.5	6.3	p 3.4	5.9	7.1	7.9	13.9	5.4	p 9.3	7.4
Sep.	7.4	6.2	p 3.3	5.6	7.7	7.7	13.1	5.2	p 9.2	7.0
Oct.	7.3	6.0	p 3.3	5.2	6.7	7.6	13.3	5.2	p 9.4	7.0
Nov.	7.2	5.9	p 3.2	5.0	6.8	7.5	13.4	5.2	p 9.2	7.3
Dec.	...	...	...	...	...	...	...	5.1	...	...
Harmonised Index of Consumer Prices Annual percentage change										
2019	1.2	1.2	1.4	2.3	1.1	1.3	0.5	0.9	0.6	2.7
2020	0.3	0.4	5 0.4	− 0.6	0.4	0.5	− 1.3	− 0.5	− 0.1	0.1
2021	2.6	3.2	5 3.2	4.5	2.1	2.1	0.6	2.4	1.9	3.2
2021 July	2.2	1.4	5 3.1	4.9	1.8	1.5	0.7	2.2	1.0	2.8
Aug.	3.0	4.7	5 3.4	5.0	1.8	2.4	1.2	3.0	2.5	3.6
Sep.	3.4	3.8	5 4.1	6.4	2.1	2.7	1.9	3.8	2.9	4.7
Oct.	4.1	5.4	5 4.6	6.8	2.8	3.2	2.8	5.1	3.2	6.0
Nov.	4.9	7.1	5 6.0	8.6	3.5	3.4	4.0	5.4	3.9	7.4
Dec.	5.0	6.6	5 5.7	12.0	3.2	3.4	4.4	5.7	4.2	7.9
General government financial balance [6] As a percentage of GDP										
2019	− 0.6	− 1.9	1.5	0.1	− 0.9	− 3.1	1.1	0.5	− 1.5	− 0.6
2020	− 7.2	− 9.1	− 4.3	− 5.6	− 5.5	− 9.1	− 10.1	− 4.9	− 9.6	− 4.5
2021	...	...	− 4.3	...	...	...	...	...	...	...
General government debt [6] As a percentage of GDP										
2018	85.5	99.9	61.3	8.2	59.8	97.8	186.4	63.1	134.4	37.1
2019	83.6	97.7	58.9	8.6	59.5	97.5	180.7	57.2	134.3	36.7
2020	97.3	112.8	68.7	19.0	69.5	115.0	206.3	58.4	155.6	43.2

Sources: Eurostat, European Commission, European Central Bank, Federal Statistical Office, Bundesbank calculations. Latest data are partly based on press reports and are provisional. **1** Euro area: quarterly data seasonally and calendar adjusted. **2** Manufacturing, mining and energy: adjusted for working-day variations. **3** Manufacturing:

I. Key economic data for the euro area

Lithuania	Luxembourg	Malta	Netherlands	Austria	Portugal	Slovakia	Slovenia	Spain	Cyprus	Period
										Real gross domestic product [1]
										Annual percentage change
4.6	3.3	5.9	2.0	1.5	2.7	2.6	3.3	2.1	5.3	2019
− 0.1	− 1.8	− 8.2	− 3.8	− 6.7	− 8.4	− 4.4	− 4.2	− 10.8	− 5.2	2020
...	...	...	...	...	...	...	...	...	...	2021
− 4.5	− 7.7	− 14.9	− 9.2	− 13.5	− 18.1	− 10.6	− 11.0	− 21.5	− 12.2	2020 Q2
0.9	0.0	− 10.9	− 2.6	− 4.4	− 6.6	− 2.0	− 1.4	− 8.6	− 4.8	Q3
0.3	0.7	− 7.8	− 2.9	− 5.7	− 6.4	− 1.8	− 3.1	− 8.8	− 4.0	Q4
1.6	5.5	− 0.9	− 2.4	− 5.1	− 5.7	0.2	1.6	− 4.6	− 2.3	2021 Q1
8.3	12.6	14.9	10.4	13.0	16.2	9.6	16.3	17.7	13.0	Q2
4.8	5.3	9.7	5.2	5.7	4.5	1.3	5.0	3.4	5.5	Q3
										Industrial production [2]
										Annual percentage change
5.2	− 1.1	1.5	0.6	4.9	0.1	4.3	5.3	0.4	6.9	2018
3.4	− 3.1	1.1	− 0.9	− 0.1	− 2.2	0.5	2.8	0.5	4.0	2019
− 2.4	− 10.7	− 0.2	− 3.9	− 5.9	− 7.3	− 9.1	− 6.4	− 9.8	− 7.2	2020
− 7.5	− 22.3	− 7.3	− 8.2	− 16.4	− 24.5	− 28.1	− 17.5	− 24.6	− 19.9	2020 Q2
− 0.3	− 7.8	− 3.0	− 4.7	− 3.3	− 1.4	− 1.5	− 3.7	− 5.3	− 4.8	Q3
0.6	− 2.0	− 0.9	− 1.9	0.9	− 2.0	1.7	− 1.0	− 2.1	− 1.7	Q4
12.4	4.6	− 8.4	− 0.6	3.3	− 0.6	6.5	3.4	2.7	1.0	2021 Q1
23.7	23.0	14.2	10.1	24.1	24.3	35.8	24.9	27.2	21.0	Q2
16.8	2.6	− 0.1	7.4	9.6	− 3.9	0.9	7.9	1.9	3.0	Q3
										Capacity utilisation in industry [3]
										As a percentage of full capacity
77.3	79.8	77.3	84.2	86.6	78.7	87.7	84.4	80.3	63.8	2019
72.9	72.2	70.4	78.2	79.2	75.5	79.3	78.2	74.3	51.7	2020
76.5	81.9	76.8	82.1	86.9	79.8	82.1	84.5	77.6	50.6	2021
71.9	76.3	68.0	76.3	77.2	71.9	78.3	76.1	71.5	49.2	2020 Q3
73.4	75.3	73.5	78.0	80.8	77.8	79.7	81.6	74.8	46.7	Q4
72.4	75.6	73.7	79.2	82.2	78.4	81.4	80.9	75.7	48.6	2021 Q1
77.0	88.2	81.1	82.2	87.1	80.7	83.2	85.8	78.1	49.5	Q2
78.0	82.1	78.3	83.6	89.7	79.1	82.7	86.6	77.6	49.4	Q3
78.4	81.8	74.1	83.3	88.5	81.0	80.9	84.6	78.9	54.9	Q4
										Standardised unemployment rate [4]
										As a percentage of civilian labour force
6.3	5.6	3.6	3.4	4.5	6.5	5.8	4.5	14.1	7.1	2019
8.6	6.8	4.4	3.9	5.4	6.9	6.7	5.0	15.5	7.6	2020
...	...	...	...	...	...	...	...	...	...	2021
7.3	5.5	3.5	3.1	p 6.0	6.6	6.7	4.5	15.0	7.2	2021 July
7.0	5.3	3.5	3.2	p 5.9	6.3	6.6	4.6	14.7	6.8	Aug.
6.7	5.2	3.5	3.1	p 5.2	6.4	6.5	4.7	14.6	6.2	Sep.
6.5	5.0	3.5	2.9	p 5.7	6.4	6.4	4.8	14.4	6.6	Oct.
6.0	5.0	3.5	2.7	p 5.3	6.3	6.3	4.8	14.1	6.4	Nov.
...	...	...	...	...	...	...	...	...	...	Dec.
										Harmonised Index of Consumer Prices
										Annual percentage change
2.2	1.6	1.5	2.7	1.5	0.3	2.8	1.7	0.8	0.5	2019
1.1	0.0	0.8	1.1	1.4	− 0.1	2.0	− 0.3	− 0.3	− 1.1	2020
4.6	3.5	0.7	2.8	2.8	0.9	2.8	2.0	3.0	2.3	2021
4.3	3.3	0.3	1.4	2.8	1.1	2.9	2.0	2.9	2.7	2021 July
5.0	3.5	0.4	2.7	3.2	1.3	3.3	2.1	3.3	3.3	Aug.
6.4	4.0	0.7	3.0	3.3	1.3	4.0	2.7	4.0	3.6	Sep.
8.2	5.3	1.4	3.7	3.8	1.8	4.4	3.5	5.4	4.4	Oct.
9.3	6.3	2.4	5.9	4.1	2.6	4.8	4.9	5.5	4.7	Nov.
10.7	5.4	2.6	6.4	3.8	2.8	5.1	5.1	6.6	4.8	Dec.
										General government financial balance [6]
										As a percentage of GDP
0.5	2.3	0.5	1.7	0.6	0.1	− 1.3	0.4	− 2.9	1.3	2019
− 7.2	− 3.5	− 9.7	− 4.2	− 8.3	− 5.8	− 5.5	− 7.7	− 11.0	− 5.7	2020
...	...	...	...	...	...	...	...	...	...	2021
										General government debt [6]
										As a percentage of GDP
33.7	20.8	43.6	52.4	74.0	121.5	49.6	70.3	97.5	98.4	2018
35.9	22.3	40.7	48.5	70.6	116.6	48.1	65.6	95.5	91.1	2019
46.6	24.8	53.4	54.3	83.2	135.2	59.7	79.8	120.0	115.3	2020

quarterly data seasonally adjusted. Data collection at the beginning of the quarter. **4** Monthly data seasonally adjusted. **5** Influenced by a temporary reduction of value added tax between July and December 2020. **6** According to Maastricht Treaty definition.

II. Overall monetary survey in the euro area

1. The money stock and its counterparts *

a) Euro area [1]

€ billion

Period	I. Lending to non-banks (non-MFIs) in the euro area					II. Net claims on non-euro area residents			III. Monetary capital formation at monetary financial institutions (MFIs) in the euro area				
		Enterprises and households		General government									
	Total	Total	of which: Securities	Total	of which: Securities	Total	Claims on non-euro area residents	Liabilities to non-euro area residents	Total	Deposits with an agreed maturity of over 2 years	Deposits at agreed notice of over 3 months	Debt securities with maturities of over 2 years (net) [2]	Capital and reserves [3]
2020 Apr.	292.3	100.6	53.7	191.7	180.7	– 105.2	16.4	121.6	– 34.2	– 9.4	– 1.1	– 4.1	– 19.7
May	293.9	121.5	32.2	172.4	177.1	9.2	– 41.8	– 51.0	21.3	5.5	– 0.8	– 0.8	17.4
June	136.5	– 15.7	15.4	152.2	160.5	68.5	– 145.3	– 213.8	– 0.7	– 6.2	– 1.2	– 8.4	15.1
July	155.4	75.4	28.2	80.0	79.4	– 35.1	89.6	124.7	0.4	1.5	– 0.1	– 7.1	6.1
Aug.	84.3	25.6	17.2	58.7	66.7	1.6	– 18.0	– 19.6	13.1	9.6	– 0.4	– 11.5	15.5
Sep.	84.4	– 2.8	– 2.9	87.2	86.3	45.9	– 26.7	– 72.6	10.6	– 11.0	– 0.2	19.4	2.5
Oct.	69.9	30.9	– 4.7	39.0	33.1	– 26.7	87.6	114.3	– 17.3	– 4.3	– 0.4	– 29.7	17.1
Nov.	117.5	72.8	29.1	44.6	45.3	– 30.4	91.8	122.2	4.8	13.2	– 0.5	– 10.7	2.7
Dec.	– 3.7	– 1.1	29.9	– 2.6	6.2	– 46.9	– 194.4	– 147.5	9.2	– 5.5	– 0.5	– 14.4	29.5
2021 Jan.	133.3	30.2	4.3	103.2	94.1	38.8	162.4	123.6	– 36.3	– 9.2	0.1	– 16.0	– 11.1
Feb.	99.8	33.8	9.0	66.0	72.7	– 14.7	28.9	43.6	– 1.2	– 5.7	– 0.5	– 2.4	7.3
Mar.	176.0	100.7	8.5	75.3	74.0	– 5.9	– 6.7	– 0.7	12.1	– 9.0	– 0.3	1.2	20.3
Apr.	55.8	13.2	8.6	42.6	29.0	– 11.4	104.5	115.9	– 36.9	– 23.9	– 0.1	– 7.5	– 5.4
May	125.0	48.3	15.3	76.6	77.6	2.6	24.5	21.8	– 23.5	– 1.2	– 0.2	– 15.1	– 6.9
June	94.5	37.2	0.8	57.3	58.6	9.2	– 74.4	– 83.7	26.8	– 6.1	– 0.4	– 4.2	37.6
July	114.0	57.2	8.2	56.8	50.3	– 3.4	78.2	81.6	3.8	– 4.7	– 0.6	9.3	– 0.2
Aug.	35.3	– 16.4	– 7.5	51.7	60.9	– 3.2	141.0	144.2	– 6.0	– 7.3	– 0.4	– 7.0	8.8
Sep.	105.9	73.1	3.8	32.8	41.5	– 39.7	– 59.0	– 19.2	15.4	– 4.5	– 0.4	8.4	11.9
Oct.	81.5	69.2	21.6	12.3	18.4	– 9.2	191.7	200.9	11.4	– 10.5	– 0.7	16.8	5.8
Nov.	167.8	99.3	0.1	68.4	69.4	– 45.1	7.3	52.4	– 6.1	– 11.6	– 0.7	1.5	4.7

b) German contribution

Period	I. Lending to non-banks (non-MFIs) in the euro area					II. Net claims on non-euro area residents			III. Monetary capital formation at monetary financial institutions (MFIs) in the euro area				
		Enterprises and households		General government									
	Total	Total	of which: Securities	Total	of which: Securities	Total	Claims on non-euro area residents	Liabilities to non-euro area residents	Total	Deposits with an agreed maturity of over 2 years	Deposits at agreed notice of over 3 months	Debt securities with maturities of over 2 years (net) [2]	Capital and reserves [3]
2020 Apr.	33.0	16.0	1.3	16.9	14.8	– 28.8	8.9	37.6	– 23.8	– 5.1	– 0.8	– 2.1	– 15.8
May	58.3	27.1	10.0	31.2	32.7	11.7	– 22.1	– 33.8	2.3	– 1.5	– 0.4	– 1.2	5.4
June	26.4	2.6	3.5	23.7	25.9	– 45.6	– 20.9	24.7	– 7.9	– 7.1	– 1.0	– 7.9	8.1
July	25.9	13.8	0.3	12.2	10.3	9.4	– 9.7	– 19.1	– 3.0	– 6.9	– 0.6	1.2	3.3
Aug.	9.3	7.5	1.9	1.8	7.9	5.6	– 8.1	– 13.7	– 5.2	– 2.2	– 0.4	– 4.4	1.8
Sep.	22.6	4.6	1.3	18.1	15.8	– 34.8	22.9	57.8	10.4	– 3.4	– 0.4	5.1	9.1
Oct.	48.7	22.1	6.6	26.7	23.9	30.1	– 16.6	– 46.8	– 2.0	– 0.5	– 0.4	– 4.5	3.4
Nov.	44.0	19.6	4.5	24.5	26.0	– 15.1	7.4	22.5	0.6	– 1.5	– 0.4	0.2	2.3
Dec.	– 0.9	7.5	3.6	– 8.4	– 4.6	– 107.2	– 35.1	72.1	– 7.5	– 1.3	– 0.3	– 7.1	1.2
2021 Jan.	30.1	12.1	3.1	18.1	18.1	41.7	79.7	38.0	– 11.4	– 2.9	– 0.6	– 1.6	– 6.4
Feb.	29.8	18.8	4.6	11.1	13.4	26.3	7.0	– 19.3	0.8	– 1.8	– 0.3	4.3	– 1.4
Mar.	54.1	35.8	1.8	18.3	19.5	– 61.9	1.9	63.9	3.5	– 3.5	– 0.3	7.1	0.2
Apr.	11.4	0.5	2.4	10.8	7.0	67.3	25.3	– 42.0	9.3	– 2.4	– 0.3	6.4	5.6
May	33.4	16.8	3.2	16.6	18.9	– 35.0	– 10.9	24.1	– 10.3	– 2.8	– 0.1	– 7.3	0.0
June	30.0	8.7	2.4	21.4	22.3	– 36.1	– 5.3	30.8	3.2	– 3.4	– 0.2	– 7.3	14.1
July	42.9	22.4	2.2	20.4	18.4	42.8	– 14.6	– 57.4	5.1	– 1.8	– 0.3	4.3	2.8
Aug.	28.5	16.6	1.6	11.9	15.7	– 18.0	18.2	36.2	2.0	– 0.5	– 0.2	0.9	1.9
Sep.	33.1	16.7	5.4	16.4	16.5	– 92.2	– 0.7	91.5	3.8	– 2.2	– 0.2	2.6	3.6
Oct.	37.8	34.7	7.2	3.0	– 0.6	47.0	47.6	0.7	18.6	1.4	– 0.2	15.6	1.8
Nov.	54.1	28.8	3.2	25.3	27.9	– 60.3	– 4.5	55.9	5.0	– 0.5	– 0.2	4.7	1.1

***** The data in this table are based on the consolidated balance sheet of monetary financial institutions (MFIs) (Table II.2); statistical breaks have been eliminated from the flow figures (see also the "Notes on the figures" in the "Explanatory notes" of the Statistical Series Banking Statistics). **1** Source: ECB. **2** Excluding MFIs' portfolios. **3** After deduction of inter-MFI participations. **4** Including the counterparts of monetary liabilities of central governments. **5** Including the monetary liabilities of central governments (Post Office, Treasury). **6** In Germany, only savings deposits. **7** Paper held by residents outside the euro area has been eliminated. **8** Less German MFIs' holdings

II. Overall monetary survey in the euro area

a) Euro area [1]

IV. Deposits of central governments	V. Other factors		VI. Money stock M3 (balance I plus II less III less IV less V)										Period
				Money stock M2									
					Money stock M1								
	Total [4]	of which: Intra-Eurosystem liability/claim related to banknote issue	Total	Total	Total	Currency in circulation	Overnight deposits [5]	Deposits with an agreed maturity of up to 2 years [5]	Deposits at agreed notice of up to 3 months [5,6]	Repo transactions	Money market fund shares (net) [2,7,8]	Debt securities with maturities of up to 2 years (incl. money market paper) (net) [2,7]	
72.1	− 21.0	0.0	166.4	174.9	175.2	20.4	154.8	− 15.0	14.7	− 4.6	16.1	− 16.0	2020 Apr.
100.9	− 46.0	0.0	217.9	226.3	189.5	20.1	169.5	16.8	19.9	9.6	− 0.6	− 8.5	May
123.2	38.2	0.0	81.6	79.0	88.5	13.1	75.4	− 20.5	10.9	− 42.7	14.3	− 6.3	June
− 6.2	− 62.4	0.0	185.3	150.9	125.1	14.3	110.8	20.1	5.8	18.1	29.8	− 10.4	July
40.7	5.8	0.0	18.2	35.3	44.8	5.9	38.9	− 18.6	9.1	− 4.8	− 0.1	− 4.2	Aug.
20.2	42.0	0.0	88.0	82.3	63.7	3.5	60.1	16.7	1.9	− 29.5	8.2	− 3.5	Sep.
− 17.2	− 40.0	0.0	108.9	85.9	100.7	7.8	93.0	− 17.3	2.5	5.3	14.1	12.5	Oct.
− 98.5	52.3	0.0	129.4	125.2	152.4	11.8	140.6	− 35.2	8.1	− 0.7	1.1	3.2	Nov.
− 128.1	− 52.0	0.0	138.3	128.3	117.1	20.8	96.2	10.6	0.6	− 24.7	20.1	− 3.5	Dec.
78.3	33.3	0.0	69.1	32.3	44.5	2.6	41.9	− 30.6	18.4	29.9	18.5	5.7	2021 Jan.
30.4	5.2	0.0	52.6	65.4	71.8	7.3	64.5	− 18.0	11.6	2.8	− 30.7	13.1	Feb.
19.6	73.3	0.0	83.3	101.6	82.6	10.5	72.2	7.3	11.7	− 18.6	− 4.7	− 13.3	Mar.
− 32.3	14.1	0.0	94.5	69.1	88.9	8.5	80.4	− 27.9	8.1	15.3	8.9	6.8	Apr.
− 8.5	49.0	0.0	110.1	115.6	116.7	13.2	103.5	− 11.7	10.7	− 4.1	− 8.9	8.1	May
16.8	− 4.3	0.0	74.0	88.1	119.7	10.5	109.2	− 33.9	2.3	− 10.8	− 8.4	− 4.6	June
0.4	− 54.5	0.0	151.2	113.4	103.2	14.6	88.6	10.5	− 0.3	17.4	22.6	7.4	July
26.6	− 8.8	0.0	28.4	33.4	32.3	1.6	30.7	− 2.5	3.6	− 12.4	5.3	− 5.9	Aug.
6.5	− 0.3	0.0	30.8	60.3	76.0	5.2	70.8	− 16.5	0.8	12.6	− 31.1	2.6	Sep.
− 2.4	− 73.7	0.0	136.1	84.4	70.3	6.8	63.5	19.1	− 5.0	13.2	31.4	8.0	Oct.
− 47.6	90.6	0.0	81.2	74.9	92.8	6.0	86.8	− 18.6	0.7	− 4.2	22.9	− 7.8	Nov.

b) German contribution

IV. Deposits of central governments	V. Other factors			VI. Money stock M3 (balance I plus II less III less IV less V) [10]								Period
		of which:			Components of the money stock							
	Total	Intra-Eurosystem liability/claim related to banknote issue [9,11]	Currency in circulation	Total	Overnight deposits	Deposits with an agreed maturity of up to 2 years	Deposits at agreed notice of up to 3 months [6]	Repo transactions	Money market fund shares (net) [7,8]	maturities with maturities of up to 2 years (incl. money market paper)(net) [7]	
17.9	8.6	3.2	4.3	1.5	9.9	− 8.1	0.1	1.7	− 0.1	1.9	2020 Apr.
28.6	− 9.3	0.3	5.3	48.4	43.4	6.2	0.3	− 1.0	− 0.1	− 0.4	May
57.8	− 69.3	− 0.4	4.7	0.1	9.9	− 7.7	− 0.1	− 1.6	− 0.2	− 0.3	June
14.2	− 11.1	2.4	3.9	35.2	27.4	8.6	− 1.1	1.3	− 0.2	− 0.8	July
21.0	− 14.2	3.8	0.9	13.3	18.6	− 4.9	0.2	− 0.4	0.3	− 0.3	Aug.
15.3	− 58.3	2.7	0.6	20.4	26.2	− 5.2	− 0.1	− 0.4	0.2	− 0.2	Sep.
− 20.0	70.5	2.4	1.7	30.3	30.6	− 0.1	− 0.0	0.2	0.6	− 1.0	Oct.
− 12.7	3.6	1.3	3.0	37.4	49.3	− 14.3	0.3	3.3	− 0.3	− 0.9	Nov.
− 22.9	− 73.4	2.4	5.6	− 4.3	− 5.8	− 1.7	1.3	3.1	0.1	− 1.3	Dec.
− 40.3	95.7	1.1	0.9	27.8	45.9	− 14.8	1.6	− 3.8	− 0.0	− 1.1	2021 Jan.
15.4	29.1	2.3	1.5	10.8	20.3	− 8.5	1.2	− 2.4	− 0.0	0.3	Feb.
− 2.3	− 38.0	2.5	2.7	29.1	24.3	− 0.6	0.1	5.0	0.5	− 0.1	Mar.
− 7.4	71.2	0.7	2.6	5.5	13.9	− 5.2	0.7	− 3.4	− 0.1	− 0.4	Apr.
18.8	− 44.9	3.0	2.9	34.8	27.8	2.8	0.6	1.7	− 0.1	2.0	May
6.0	− 14.0	3.1	2.3	− 1.2	7.1	− 8.0	− 0.4	− 0.2	0.1	0.3	June
− 12.0	75.2	4.2	3.7	17.4	21.2	− 4.1	− 0.3	0.6	− 0.1	0.1	July
0.7	− 13.2	2.9	0.2	21.0	20.4	− 1.6	− 0.3	0.1	0.0	2.3	Aug.
7.1	− 77.3	4.6	0.8	7.3	7.6	− 1.3	− 0.6	1.5	− 0.0	0.1	Sep.
− 3.9	53.7	3.3	1.6	16.4	3.9	13.0	− 0.4	− 0.4	− 0.1	0.4	Oct.
7.4	− 42.4	3.7	1.2	23.8	40.8	− 12.4	− 0.1	− 4.7	− 0.3	0.4	Nov.

of paper issued by euro area MFIs. **9** Including national banknotes still in circulation. **10** The German contributions to the Eurosystem's monetary aggregates should on no account be interpreted as national monetary aggregates and are therefore not comparable with the erstwhile German money stocks M1, M2 or M3. **11** The difference between the volume of euro banknotes actually issued by the Bundesbank and the amount disclosed in accordance with the accounting regime chosen by the Eurosystem (see also footnote 2 on banknote circulation in Table III.2).

II. Overall monetary survey in the euro area

2. Consolidated balance sheet of monetary financial institutions (MFIs) *

End of month	Total assets or liabilities	Assets										
		Lending to non-banks (non-MFIs) in the euro area									Claims on non-euro area residents	Other assets
			Enterprises and households				General government					
		Total	Total	Loans	Debt securities 2	Shares and other equities	Total	Loans	Debt securities 3			
	Euro area (€ billion) 1											
2019 Oct.	28,966.7	18,690.1	14,043.5	11,660.4	1,551.5	831.6	4,646.7	1,002.4	3,644.3	6,259.8	4,016.8
Nov.	29,016.4	18,729.9	14,100.0	11,684.5	1,569.8	845.7	4,629.9	998.5	3,631.4	6,269.6	4,016.9
Dec.	28,325.6	18,591.8	14,008.8	11,616.8	1,544.2	847.8	4,582.9	981.0	3,601.9	5,930.4	3,803.4
2020 Jan.	29,018.7	18,723.0	14,063.1	11,668.8	1,543.2	851.0	4,659.9	1,003.4	3,656.5	6,301.7	3,994.0
Feb.	29,486.1	18,768.4	14,102.9	11,697.4	1,564.1	841.4	4,665.5	992.3	3,673.3	6,412.9	4,304.7
Mar.	30,019.5	19,015.8	14,241.5	11,884.9	1,559.3	797.3	4,774.4	1,006.7	3,767.6	6,482.9	4,520.8
Apr.	30,449.1	19,309.7	14,350.3	11,933.4	1,614.3	802.5	4,959.5	1,018.1	3,941.4	6,583.0	4,556.4
May	30,500.5	19,611.5	14,470.1	12,020.6	1,646.6	802.8	5,141.4	1,013.8	4,127.7	6,464.0	4,425.1
June	30,406.4	19,761.9	14,451.9	11,982.0	1,653.7	816.1	5,310.0	1,005.3	4,304.7	6,297.2	4,347.3
July	30,598.6	19,912.2	14,334.1	12,013.7	1,506.0	814.5	5,578.1	1,006.0	4,572.1	6,291.1	4,395.3
Aug.	30,434.9	19,985.0	14,355.1	12,019.1	1,525.0	811.0	5,629.9	997.8	4,632.1	6,241.9	4,208.0
Sep.	30,522.8	20,084.9	14,349.5	12,019.2	1,520.4	809.9	5,735.4	998.7	4,736.8	6,238.0	4,199.8
Oct.	30,687.0	20,162.5	14,376.6	12,054.8	1,520.5	801.3	5,785.9	1,004.2	4,781.7	6,337.4	4,187.0
Nov.	30,749.4	20,292.0	14,457.7	12,090.4	1,542.2	825.0	5,834.4	1,003.4	4,831.0	6,331.0	4,126.4
Dec.	30,438.6	20,266.0	14,438.2	12,042.9	1,532.1	863.2	5,827.8	990.2	4,837.6	6,108.9	4,063.7
2021 Jan.	30,643.6	20,387.8	14,466.2	12,067.8	1,535.7	862.6	5,921.6	999.4	4,922.2	6,299.8	3,956.0
Feb.	30,546.1	20,463.6	14,500.5	12,090.1	1,541.1	869.3	5,963.1	992.4	4,970.7	6,300.7	3,781.8
Mar.	30,827.0	20,653.7	14,576.8	12,185.3	1,512.5	879.0	6,076.9	993.3	5,083.6	6,360.7	3,812.6
Apr.	30,752.9	20,667.1	14,566.5	12,169.2	1,509.6	887.7	6,100.6	1,007.2	5,093.4	6,396.3	3,689.5
May	30,890.4	20,788.2	14,612.7	12,198.6	1,521.5	892.6	6,175.5	1,006.2	5,169.3	6,434.1	3,668.1
June	30,991.0	20,890.6	14,652.8	12,234.6	1,529.9	888.3	6,237.9	1,004.8	5,233.1	6,400.1	3,700.3
July	31,313.8	21,028.8	14,708.4	12,278.0	1,543.7	886.7	6,320.4	1,011.3	5,309.1	6,504.0	3,781.0
Aug.	31,438.1	21,048.3	14,685.2	12,261.1	1,533.7	890.4	6,363.1	1,002.3	5,360.8	6,653.2	3,736.6
Sep.	31,474.0	21,134.5	14,758.2	12,331.3	1,535.4	891.4	6,376.3	993.6	5,382.8	6,620.1	3,719.3
Oct.	31,776.0	21,202.0	14,818.0	12,378.9	1,548.9	890.2	6,384.0	987.7	5,396.3	6,822.0	3,752.1
Nov.	32,187.2	21,389.5	14,919.9	12,482.1	1,547.0	890.8	6,469.6	985.7	5,483.9	6,905.9	3,891.9
	German contribution (€ billion)										
2019 Oct.	6,769.9	4,466.0	3,506.4	3,049.0	195.9	261.4	959.5	291.6	667.9	1,303.7	1,000.3
Nov.	6,785.4	4,490.1	3,527.4	3,064.8	199.7	262.9	962.6	292.6	670.0	1,289.6	1,005.8
Dec.	6,716.1	4,480.4	3,527.3	3,064.0	197.9	265.4	953.1	288.5	664.6	1,236.4	999.3
2020 Jan.	6,847.7	4,503.3	3,537.5	3,071.5	198.2	267.8	965.8	292.8	673.0	1,290.1	1,054.4
Feb.	7,028.5	4,531.0	3,562.2	3,092.6	203.2	266.4	968.8	290.8	678.0	1,306.1	1,191.4
Mar.	7,148.1	4,567.1	3,589.0	3,128.9	202.1	258.0	978.1	292.4	685.7	1,321.3	1,259.6
Apr.	7,258.0	4,605.2	3,606.5	3,143.8	206.5	256.1	998.7	294.8	703.9	1,346.6	1,306.2
May	7,230.4	4,666.4	3,640.1	3,167.2	215.9	257.1	1,026.2	293.8	732.5	1,326.0	1,238.1
June	7,225.3	4,692.6	3,641.6	3,164.7	220.4	256.6	1,051.0	291.5	759.6	1,304.2	1,228.5
July	7,267.6	4,718.8	3,634.9	3,175.5	202.7	256.7	1,083.9	293.4	790.5	1,282.9	1,265.8
Aug.	7,167.3	4,723.0	3,642.2	3,180.7	202.9	258.6	1,080.8	287.4	793.3	1,268.8	1,175.5
Sep.	7,236.4	4,749.2	3,647.1	3,184.0	204.9	258.1	1,102.1	289.7	812.4	1,293.8	1,193.4
Oct.	7,257.1	4,801.4	3,670.3	3,200.4	210.7	259.3	1,131.1	292.0	839.1	1,278.8	1,176.8
Nov.	7,240.5	4,841.7	3,688.6	3,213.7	214.3	260.6	1,153.1	290.2	862.9	1,261.9	1,136.9
Dec.	7,172.5	4,839.4	3,695.5	3,216.4	214.7	264.5	1,143.9	286.4	857.4	1,224.1	1,109.1
2021 Jan.	7,220.7	4,865.5	3,705.9	3,224.4	216.4	265.1	1,159.6	286.5	873.1	1,307.6	1,047.6
Feb.	7,182.0	4,885.0	3,724.3	3,238.8	217.4	268.1	1,160.7	283.8	877.0	1,305.0	991.9
Mar.	7,233.5	4,939.8	3,761.1	3,273.4	217.3	270.4	1,178.7	282.6	896.1	1,315.4	978.3
Apr.	7,228.4	4,946.1	3,760.5	3,270.3	217.6	272.6	1,185.6	285.7	899.9	1,333.6	948.6
May	7,228.0	4,977.5	3,777.2	3,283.3	219.5	274.4	1,200.3	283.4	916.9	1,329.8	920.7
June	7,277.1	5,009.8	3,786.4	3,290.4	220.8	275.2	1,223.4	282.3	941.1	1,325.1	942.1
July	7,362.7	5,062.4	3,808.5	3,310.2	221.9	276.4	1,253.9	284.4	969.5	1,317.4	982.9
Aug.	7,395.2	5,087.3	3,824.6	3,325.1	221.4	278.1	1,262.8	280.8	982.0	1,336.0	971.9
Sep.	7,398.6	5,110.8	3,840.8	3,336.4	224.7	279.7	1,270.1	280.7	989.4	1,335.1	952.6
Oct.	7,461.0	5,147.0	3,874.5	3,363.5	228.6	282.4	1,272.5	284.4	988.0	1,385.2	928.8
Nov.	7,575.0	5,210.5	3,904.1	3,389.9	229.0	285.2	1,306.4	280.7	1,025.7	1,396.5	968.1

***** Monetary financial institutions (MFIs) comprise banks (including building and loan associations), money market funds, and the European Central Bank and national central banks (the Eurosystem). **1** Source: ECB. **2** Including money market paper of enterprises. **3** Including Treasury bills and other money market paper issued by general government. **4** Euro currency in circulation (see also footnote 8 on p.12•). Excluding MFIs` cash in hand (in euro). The German contribution includes the volume of

II. Overall monetary survey in the euro area

Liabilities										
	Deposits of non-banks (non-MFIs) in the euro area									
			Enterprises and households							
					With agreed maturities of			At agreed notice of [6]		
Currency in circulation [4]	Total	of which: in euro [5]	Total	Overnight	up to 1 year	over 1 year and up to 2 years	over 2 years	up to 3 months	over 3 months	End of month
										Euro area (€ billion) [1]
1,208.2	13,292.6	12,422.6	12,487.1	7,283.5	758.7	201.3	1,883.2	2,311.1	49.4	2019 Oct.
1,215.1	13,389.0	12,520.8	12,572.5	7,386.6	740.9	200.6	1,885.5	2,310.4	48.6	Nov.
1,231.5	13,311.4	12,508.3	12,583.4	7,391.7	738.4	200.1	1,892.8	2,314.1	46.2	Dec.
1,224.1	13,359.6	12,460.6	12,555.5	7,362.8	734.5	200.1	1,891.0	2,322.3	44.7	2020 Jan.
1,229.3	13,477.0	12,528.5	12,615.6	7,430.6	731.6	198.6	1,888.7	2,322.0	44.1	Feb.
1,253.1	13,775.3	12,782.4	12,903.7	7,698.1	759.4	192.1	1,883.4	2,327.6	43.1	Mar.
1,273.5	13,996.0	12,953.0	13,065.1	7,852.4	762.3	188.2	1,876.7	2,343.4	42.1	Apr.
1,293.5	14,302.8	13,164.0	13,264.9	8,009.7	779.7	188.4	1,881.9	2,363.7	41.4	May
1,306.6	14,478.2	13,208.9	13,310.8	8,066.5	763.6	186.8	1,877.8	2,375.5	40.6	June
1,320.9	14,592.9	13,276.6	13,363.7	8,090.1	783.2	186.3	1,882.5	2,381.1	40.4	July
1,326.8	14,668.1	13,304.3	13,391.2	8,117.1	767.8	184.4	1,892.0	2,390.0	40.0	Aug.
1,330.3	14,758.4	13,361.0	13,467.6	8,175.8	781.0	195.4	1,883.6	2,392.0	39.8	Sep.
1,338.1	14,814.8	13,431.7	13,545.6	8,266.0	783.3	181.9	1,880.4	2,394.6	39.4	Oct.
1,349.9	14,813.0	13,527.2	13,621.6	8,358.3	756.5	179.6	1,885.7	2,402.5	39.0	Nov.
1,370.7	14,772.9	13,620.6	13,728.8	8,459.6	772.0	176.9	1,877.6	2,404.2	38.5	Dec.
1,373.3	14,873.9	13,631.3	13,752.9	8,505.4	743.9	173.8	1,870.6	2,421.0	38.1	2021 Jan.
1,380.6	14,957.8	13,678.6	13,807.8	8,569.5	733.7	169.2	1,865.1	2,432.5	37.7	Feb.
1,391.1	15,076.4	13,757.0	13,913.7	8,654.9	753.5	164.3	1,858.8	2,444.8	37.4	Mar.
1,399.6	15,061.0	13,775.3	13,936.1	8,727.0	731.8	159.5	1,827.5	2,453.0	37.3	Apr.
1,412.8	15,147.4	13,870.8	14,018.1	8,811.1	724.4	155.5	1,826.2	2,463.6	37.1	May
1,423.2	15,241.8	13,943.4	14,091.3	8,917.7	698.2	150.4	1,822.0	2,466.2	36.8	June
1,437.5	15,335.4	14,017.2	14,185.7	9,006.7	705.9	153.6	1,817.0	2,466.2	36.3	July
1,439.1	15,386.3	14,039.3	14,196.7	9,030.0	707.3	151.2	1,809.9	2,462.4	35.9	Aug.
1,444.3	15,442.5	14,075.3	14,239.7	9,092.9	701.1	140.0	1,806.7	2,463.3	35.6	Sep.
1,450.1	15,504.3	14,138.4	14,312.0	9,165.8	708.9	148.0	1,795.6	2,458.8	34.9	Oct.
1,456.2	15,518.0	14,187.2	14,344.7	9,223.5	698.5	143.1	1,785.5	2,459.8	34.3	Nov.
										German contribution (€ billion)
277.6	3,848.5	3,734.8	3,571.5	2,240.3	148.6	31.2	575.2	539.9	36.4	2019 Oct.
278.4	3,874.7	3,753.7	3,580.0	2,257.7	143.0	30.8	573.7	539.2	35.6	Nov.
281.8	3,863.9	3,744.4	3,574.3	2,250.5	144.8	31.0	573.5	540.0	34.5	Dec.
281.2	3,850.4	3,733.8	3,572.3	2,255.2	145.3	31.0	570.6	537.2	33.0	2020 Jan.
281.3	3,890.4	3,750.4	3,576.3	2,265.3	142.0	31.3	569.8	535.4	32.5	Feb.
282.2	3,982.8	3,830.4	3,655.2	2,346.4	147.3	30.5	567.2	532.0	31.8	Mar.
286.5	3,997.3	3,828.9	3,665.7	2,359.6	149.2	30.0	563.6	532.2	31.1	Apr.
291.8	4,080.7	3,885.8	3,710.9	2,396.9	158.3	29.0	563.6	532.5	30.7	May
296.5	4,132.2	3,873.6	3,711.6	2,408.7	152.1	29.6	559.0	532.6	29.7	June
300.4	4,170.7	3,880.3	3,716.8	2,409.9	163.5	30.0	552.8	531.5	29.2	July
301.3	4,202.4	3,889.9	3,720.2	2,419.2	159.3	30.1	551.3	531.6	28.8	Aug.
301.9	4,235.6	3,905.7	3,745.0	2,445.3	160.3	30.3	549.2	531.5	28.4	Sep.
303.6	4,245.3	3,935.3	3,781.4	2,476.4	165.4	30.5	549.7	531.5	28.0	Oct.
306.6	4,260.2	3,961.8	3,804.4	2,507.7	157.7	30.6	549.0	531.8	27.6	Nov.
312.2	4,228.5	3,954.1	3,801.5	2,500.9	160.3	31.0	548.8	533.1	27.3	Dec.
313.1	4,218.7	3,980.7	3,829.7	2,541.7	147.0	31.0	548.5	534.8	26.8	2021 Jan.
314.6	4,245.1	3,990.0	3,837.4	2,555.8	141.0	31.1	547.0	536.0	26.4	Feb.
317.3	4,264.3	4,011.8	3,863.4	2,579.8	145.1	31.7	544.6	536.1	26.1	Mar.
319.9	4,262.2	4,013.0	3,874.5	2,594.4	143.0	31.9	542.5	536.8	25.8	Apr.
322.8	4,308.8	4,040.3	3,895.1	2,613.5	146.0	32.2	540.4	537.4	25.7	May
325.1	4,311.0	4,035.3	3,890.5	2,619.4	139.3	31.9	537.5	537.0	25.5	June
328.8	4,313.9	4,047.3	3,911.3	2,645.8	136.0	31.4	536.0	536.7	25.2	July
329.0	4,333.1	4,065.2	3,923.1	2,659.1	135.6	31.3	535.7	536.4	25.0	Aug.
329.8	4,340.5	4,064.1	3,919.8	2,662.1	132.2	31.2	533.6	535.8	24.8	Sep.
331.4	4,354.3	4,080.9	3,950.3	2,681.4	143.0	31.1	534.8	535.5	24.6	Oct.
332.6	4,390.5	4,106.8	3,968.0	2,710.9	132.5	30.1	534.7	535.5	24.3	Nov.

euro banknotes put into circulation by the Bundesbank in accordance with the accounting regime chosen by the Eurosystem (see also footnote 2 on banknote circulation in Table III.2). The volume of currency actually put into circulation by the Bundesbank can be calculated by adding to this total the item "Intra-Eurosystem liability/claim related to banknote issue" (see "Other liability items"). **5** Excluding central governments' deposits. **6** In Germany, only savings deposits.

II. Overall monetary survey in the euro area

2. Consolidated balance sheet of monetary financial institutions (MFIs) * (cont'd)

End of month	Liabilities (cont'd)												
	Deposits of non-banks (non-MFIs) in the euro area (cont'd)								Repo transactions with non-banks in the euro area		Money market fund shares (net) [3]	Debt securities	
	General government												
		Other general government											
				With agreed maturities of			At agreed notice of [2]						
	Central government	Total	Overnight	up to 1 year	over 1 year and up to 2 years	over 2 years	up to 3 months	over 3 months	Total	of which: Enterprises and households		Total	of which: Denominated in euro
	Euro area (€ billion) [1]												
2019 Oct.	365.0	440.5	224.5	95.5	32.3	59.1	25.2	3.9	298.8	298.3	538.3	2,176.2	1,488.7
Nov.	363.9	452.6	235.7	95.5	33.8	59.1	24.8	3.8	284.3	283.7	541.3	2,187.5	1,493.3
Dec.	297.5	430.4	224.7	85.9	33.7	59.1	23.6	3.6	250.3	249.8	519.8	2,154.2	1,487.0
2020 Jan.	381.8	422.3	209.6	92.7	33.2	59.5	23.2	4.1	243.4	242.9	551.8	2,187.7	1,500.2
Feb.	425.5	436.0	219.8	96.8	32.8	59.2	23.3	4.0	263.2	262.7	547.4	2,190.9	1,497.8
Mar.	430.2	441.4	232.8	93.3	31.0	58.2	22.3	3.9	293.2	292.6	526.9	2,173.9	1,484.3
Apr.	502.3	428.6	233.9	84.0	29.4	56.4	21.1	3.8	289.0	288.6	542.9	2,158.7	1,472.6
May	603.1	434.8	245.9	81.7	28.4	54.7	20.3	3.8	297.8	297.5	542.3	2,134.3	1,470.7
June	726.2	441.1	259.5	82.4	24.6	51.8	19.3	3.4	254.8	254.6	556.6	2,105.0	1,453.7
July	787.6	441.5	264.3	80.1	23.2	51.0	19.4	3.5	271.8	271.6	586.4	2,055.1	1,434.5
Aug.	828.4	448.5	273.6	79.5	22.1	50.3	19.6	3.5	266.9	266.7	587.0	2,036.6	1,425.3
Sep.	848.8	442.1	274.8	74.4	20.8	49.1	19.5	3.4	237.7	237.5	595.2	2,059.6	1,431.0
Oct.	831.5	437.6	277.4	69.6	20.8	47.0	19.5	3.4	243.1	242.9	609.3	2,043.2	1,418.6
Nov.	733.0	458.4	307.1	64.6	17.8	46.1	19.4	3.3	246.4	246.4	610.3	2,025.2	1,406.4
Dec.	604.8	439.3	294.7	60.3	17.2	44.8	19.0	3.3	221.4	221.3	626.0	1,995.5	1,386.3
2021 Jan.	683.2	437.8	294.4	58.9	17.4	44.1	19.2	3.8	251.6	251.5	644.5	1,990.9	1,369.7
Feb.	713.6	436.4	296.4	54.3	19.0	43.9	19.2	3.7	254.6	254.5	613.8	2,004.3	1,369.6
Mar.	733.1	429.6	295.4	52.1	16.4	43.2	18.9	3.7	236.5	236.5	609.1	2,005.5	1,357.4
Apr.	700.9	424.0	293.9	48.5	16.2	42.9	18.9	3.6	251.1	251.0	618.0	1,991.6	1,350.5
May	692.4	436.9	308.3	47.7	15.9	42.4	19.1	3.5	246.7	246.7	608.5	1,980.7	1,339.4
June	709.3	441.2	314.0	46.6	16.3	42.0	18.8	3.5	236.5	236.5	600.0	1,984.2	1,332.4
July	709.7	440.1	313.9	45.6	16.6	42.0	18.6	3.5	253.9	253.8	622.7	1,999.4	1,334.0
Aug.	736.1	453.5	329.1	43.9	17.0	42.0	18.0	3.4	241.6	241.5	628.0	1,988.8	1,334.1
Sep.	742.7	460.1	334.6	46.3	16.6	41.3	18.1	3.3	257.1	257.0	596.9	2,011.7	1,343.3
Oct.	740.3	452.0	323.3	48.2	18.0	41.6	17.7	3.3	270.2	270.2	628.3	2,038.9	1,355.8
Nov.	692.4	480.9	349.1	50.2	19.1	41.6	17.5	3.3	266.5	266.5	651.1	2,044.4	1,354.6
	German contribution (€ billion)												
2019 Oct.	37.4	239.6	76.3	82.4	26.1	51.3	3.1	0.5	1.2	1.0	2.1	555.2	299.2
Nov.	45.4	249.3	83.4	83.9	27.4	51.1	3.1	0.5	1.7	1.5	1.9	560.4	302.2
Dec.	43.4	246.2	89.5	75.4	27.0	51.0	2.9	0.4	3.5	3.4	1.8	551.4	301.6
2020 Jan.	37.8	240.2	77.8	81.4	26.6	51.3	2.7	0.4	2.5	2.4	1.8	560.9	306.5
Feb.	62.2	251.9	85.5	86.0	26.3	50.9	2.8	0.4	2.0	1.8	1.8	563.9	310.3
Mar.	69.7	257.9	97.6	82.5	24.7	49.8	2.8	0.4	1.7	1.6	2.2	553.0	310.7
Apr.	87.5	244.0	94.7	74.4	23.7	48.3	2.7	0.4	3.4	3.3	2.1	550.6	306.2
May	116.2	253.6	108.0	72.9	22.9	46.7	2.8	0.3	2.4	2.3	1.9	543.1	305.4
June	174.0	246.5	106.1	74.1	19.5	44.0	2.5	0.3	0.9	0.7	1.8	532.8	297.2
July	208.5	245.3	109.6	71.4	18.3	43.2	2.5	0.3	2.1	2.0	1.6	523.3	293.3
Aug.	229.5	252.8	118.7	71.3	17.4	42.4	2.6	0.3	1.7	1.5	1.9	517.9	291.1
Sep.	244.7	245.8	119.4	66.0	16.5	41.1	2.5	0.3	1.3	1.1	2.0	525.3	296.1
Oct.	224.8	239.1	119.1	61.7	16.6	39.0	2.5	0.3	1.4	1.3	2.7	519.9	296.2
Nov.	212.1	243.7	131.6	57.3	14.0	38.0	2.5	0.2	9.1	9.1	2.4	515.5	296.1
Dec.	189.2	237.8	131.9	52.8	13.5	36.8	2.5	0.2	12.2	12.2	2.5	503.3	290.1
2021 Jan.	148.9	240.1	136.5	51.6	13.5	35.8	2.4	0.2	8.4	8.4	2.4	503.3	284.6
Feb.	164.3	243.4	142.8	47.3	15.2	35.5	2.5	0.2	6.0	6.0	2.4	510.0	288.4
Mar.	161.9	239.0	144.4	44.9	12.7	34.4	2.4	0.2	11.0	11.0	2.9	523.3	289.8
Apr.	154.6	233.1	142.4	41.5	12.5	34.1	2.4	0.2	7.6	7.6	2.8	524.3	296.2
May	173.3	240.3	150.8	41.0	12.5	33.4	2.4	0.2	9.2	9.2	2.2	518.0	293.2
June	179.3	241.2	152.9	39.9	13.0	32.8	2.4	0.2	9.0	9.0	2.3	515.5	294.6
July	167.3	235.3	148.0	38.9	13.3	32.5	2.4	0.2	9.6	9.6	2.2	518.3	295.1
Aug.	168.1	241.8	155.7	37.3	13.9	32.4	2.4	0.2	9.7	9.7	2.2	522.4	303.1
Sep.	175.2	245.6	158.2	39.8	13.4	31.7	2.3	0.2	11.2	11.2	2.2	530.1	305.5
Oct.	171.3	232.7	142.7	40.9	14.8	31.8	2.3	0.2	10.8	10.8	2.1	547.9	316.4
Nov.	178.7	243.8	155.1	38.7	16.1	31.6	2.2	0.2	6.1	6.1	1.8	555.5	324.7

***** Monetary financial institutions (MFIs) comprise banks (including building and loan associations), money market funds, and the European Central Bank and national central banks (the Eurosystem). **1** Source: ECB. **2** In Germany, only savings deposits. **3** Excluding holdings of MFIs; for the German contribution, excluding German MFIs' portfolios of securities issued by MFIs in the euro area. **4** In Germany, bank debt securities with maturities of up to one year are classed as money market paper. **5** Excluding liabilities arising from securities issued. **6** After deduction of inter-MFI participations. **7** The German contributions to the Eurosystem's monetary aggregates should on no account be interpreted as national monetary aggregates and are therefore not comparable with the erstwhile German money stocks M1, M2 or M3. **8** Including DEM banknotes still in circulation (see also footnote 4 on p. 10•). **9** For the German contribution, the difference between the volume of euro banknotes

II. Overall monetary survey in the euro area

issued (net) [3]						Other liability items		Memo item: Monetary aggregates [7] (from 2002 German contribution excludes currency in circulation)					
With maturities of													
up to 1 year [4]	over 1 year and up to 2 years	over 2 years	Liabilities to non-euro area residents [5]	Capital and reserves [6]	Excess of inter-MFI liabilities	Total [8]	of which: Intra-Eurosystem-liability/ claim related to banknote issue [9]	M1 [10]	M2 [11]	M3 [12]	Monetary capital formation [13]	Monetary liabilities of central governments (Post Office, Treasury) [14]	End of month
Euro area (€ billion) [1]													
8.0	19.3	2,148.9	4,767.5	2,935.0	34.5	3,715.7	0.0	8,846.0	12,293.2	12,936.1	7,079.4	152.9	2019 Oct.
6.8	19.2	2,161.5	4,769.8	2,922.7	31.4	3,675.2	0.0	8,971.7	12,401.3	13,041.1	7,081.1	157.9	Nov.
– 11.0	19.2	2,146.1	4,452.0	2,912.1	25.2	3,469.2	0.0	8,975.3	12,395.7	12,995.0	7,059.8	152.0	Dec.
– 0.3	21.7	2,166.2	4,762.6	2,949.8	24.3	3,715.4	0.0	8,927.4	12,357.5	13,003.1	7,115.3	154.9	2020 Jan.
3.5	23.0	2,164.4	4,820.3	2,966.7	26.4	3,964.7	0.0	9,012.7	12,441.8	13,101.0	7,127.1	156.9	Feb.
29.8	20.5	2,123.6	4,910.3	2,930.7	11.6	4,144.5	0.0	9,312.6	12,762.0	13,448.8	7,043.0	152.5	Mar.
12.7	21.3	2,124.8	5,058.7	2,947.0	– 25.4	4,208.7	0.0	9,490.6	12,941.2	13,619.4	7,050.8	153.0	Apr.
4.1	22.2	2,108.0	4,956.8	2,952.7	– 33.1	4,053.3	0.0	9,682.0	13,166.2	13,836.0	7,042.6	154.7	May
– 0.3	20.6	2,084.7	4,723.1	2,977.4	– 4.2	4,008.9	0.0	9,768.9	13,242.8	13,915.4	7,035.8	158.0	June
– 11.9	19.9	2,047.1	4,744.5	3,017.5	– 54.6	4,064.1	0.0	9,813.1	13,308.1	14,012.0	7,042.1	159.4	July
– 15.4	19.2	2,032.9	4,711.2	3,014.5	– 38.8	3,862.5	0.0	9,856.0	13,340.6	14,027.9	7,033.2	160.0	Aug.
– 14.4	15.3	2,058.7	4,666.9	3,011.2	– 15.9	3,879.2	0.0	9,923.5	13,428.0	14,122.0	7,045.8	163.9	Sep.
– 2.2	15.2	2,030.1	4,789.8	3,038.2	– 47.9	3,858.5	0.0	10,025.3	13,516.4	14,233.1	7,038.6	165.3	Oct.
– 1.5	17.4	2,009.2	4,868.1	2,995.8	– 44.2	3,884.8	0.0	10,167.5	13,629.7	14,354.2	6,979.2	174.0	Nov.
– 4.6	16.9	1,983.2	4,671.6	3,020.4	– 11.3	3,771.4	0.0	10,278.9	13,750.6	14,480.2	6,967.8	176.0	Dec.
1.9	15.7	1,973.3	4,821.4	2,998.3	– 10.2	3,700.1	0.0	10,326.2	13,784.9	14,551.2	6,928.1	177.5	2021 Jan.
13.8	16.4	1,974.2	4,872.9	2,952.8	– 10.9	3,520.1	0.0	10,398.7	13,851.2	14,604.3	6,877.4	176.8	Feb.
– 0.7	16.9	1,989.3	4,944.3	2,967.4	15.9	3,580.8	0.0	10,490.2	13,964.5	14,699.1	6,899.7	173.1	Mar.
6.5	16.5	1,968.5	4,989.3	2,947.8	10.4	3,484.2	0.0	10,569.9	14,021.8	14,781.1	6,827.7	173.5	Apr.
14.8	15.9	1,950.0	4,995.9	2,968.3	53.3	3,476.7	0.0	10,684.4	14,134.5	14,887.1	6,827.6	176.1	May
10.6	16.1	1,957.5	4,964.4	2,979.7	57.4	3,503.8	0.0	10,811.2	14,231.7	14,971.2	6,841.5	180.3	June
16.9	17.1	1,965.4	5,049.4	3,024.5	40.5	3,550.6	0.0	10,914.9	14,345.4	15,122.6	6,888.6	180.9	July
12.1	16.3	1,960.4	5,197.7	3,024.1	33.0	3,499.5	0.0	10,956.5	14,380.4	15,153.1	6,875.7	182.3	Aug.
14.0	17.9	1,979.8	5,221.8	2,997.3	20.9	3,481.4	0.0	11,035.2	14,444.6	15,191.5	6,864.0	187.4	Sep.
21.6	17.8	1,999.4	5,420.5	2,999.3	– 17.8	3,482.1	0.0	11,103.5	14,527.0	15,325.0	6,874.1	188.2	Oct.
16.9	18.1	2,009.5	5,515.9	3,039.3	21.0	3,674.8	0.0	11,193.7	14,605.9	15,414.0	6,913.5	188.9	Nov.
German contribution (€ billion)													
20.7	6.7	527.8	867.4	750.0	– 918.5	1,664.0	426.3	2,316.5	3,147.7	3,178.4	1,941.3	0.0	2019 Oct.
21.4	5.8	533.1	877.7	749.1	– 951.9	1,671.9	430.8	2,341.2	3,168.5	3,199.3	1,943.1	0.0	Nov.
21.0	6.1	524.3	863.5	750.1	– 999.8	1,681.4	435.8	2,340.1	3,161.1	3,193.6	1,933.9	0.0	Dec.
23.9	6.7	530.2	831.0	757.2	– 900.5	1,744.6	437.9	2,333.0	3,157.1	3,192.1	1,942.8	0.0	2020 Jan.
21.7	6.8	535.4	850.2	764.8	– 912.0	1,867.4	442.7	2,350.9	3,174.6	3,207.0	1,953.8	0.0	Feb.
18.4	6.3	528.3	901.4	757.6	– 990.7	1,940.1	455.0	2,444.0	3,263.9	3,292.5	1,935.1	0.0	Mar.
15.9	6.9	527.8	942.0	759.1	– 1,003.6	2,007.1	458.2	2,454.3	3,266.4	3,294.7	1,930.3	0.0	Apr.
14.9	7.3	520.8	917.3	756.1	– 1,003.8	1,932.8	458.5	2,505.0	3,323.2	3,349.8	1,918.3	0.0	May
14.8	7.1	510.9	939.7	769.1	– 1,074.1	1,923.1	458.1	2,514.8	3,325.2	3,349.7	1,913.0	0.0	June
12.8	6.7	503.7	907.0	784.6	– 1,089.1	1,967.5	460.5	2,519.5	3,336.8	3,360.1	1,913.6	0.0	July
12.0	7.2	498.7	891.2	778.4	– 1,114.7	1,888.5	464.3	2,537.9	3,350.2	3,372.9	1,899.9	0.0	Aug.
12.4	6.7	506.2	952.4	787.3	– 1,172.8	1,905.3	467.0	2,564.6	3,371.8	3,394.2	1,912.5	0.0	Sep.
11.1	7.0	501.8	906.4	794.7	– 1,107.6	1,894.1	469.4	2,595.4	3,403.6	3,425.7	1,913.5	0.0	Oct.
10.0	7.1	498.4	923.3	780.2	– 1,109.5	1,859.4	470.7	2,639.3	3,433.2	3,461.8	1,893.5	0.0	Nov.
9.0	6.6	487.7	985.7	787.5	– 1,192.0	1,844.9	473.1	2,632.8	3,426.1	3,456.4	1,888.4	0.0	Dec.
7.8	6.8	488.7	1,026.4	778.3	– 1,113.3	1,796.5	474.2	2,678.2	3,458.5	3,483.9	1,878.3	0.0	2021 Jan.
7.4	7.5	495.1	1,007.6	756.3	– 1,095.7	1,750.3	476.5	2,698.6	3,471.7	3,494.9	1,860.6	0.0	Feb.
8.1	6.8	508.4	1,080.1	754.4	– 1,144.4	1,742.0	479.0	2,724.1	3,497.0	3,525.7	1,868.2	0.0	Mar.
7.8	6.6	510.0	1,029.5	759.2	– 1,074.2	1,717.0	479.7	2,736.8	3,505.0	3,529.7	1,871.8	0.0	Apr.
9.6	6.7	501.7	1,051.5	768.2	– 1,126.5	1,696.6	482.8	2,764.3	3,535.8	3,563.5	1,869.6	0.0	May
9.8	6.9	498.8	1,088.8	775.4	– 1,149.4	1,724.5	485.9	2,772.3	3,535.7	3,563.7	1,870.2	0.0	June
9.8	7.0	501.5	1,031.5	795.8	– 1,075.6	1,767.0	490.0	2,793.9	3,552.6	3,581.2	1,891.2	0.0	July
12.7	6.5	503.2	1,068.1	793.5	– 1,088.4	1,754.6	492.9	2,814.8	3,571.7	3,602.8	1,889.9	0.0	Aug.
13.1	7.0	510.1	1,165.5	781.6	– 1,156.2	1,723.6	497.5	2,820.3	3,575.1	3,608.5	1,881.9	0.0	Sep.
13.3	7.2	527.5	1,165.8	783.9	– 1,110.5	1,706.6	500.8	2,824.1	3,591.6	3,625.0	1,902.8	0.0	Oct.
13.5	7.4	534.6	1,228.7	803.0	– 1,154.8	1,744.2	504.5	2,866.0	3,621.1	3,649.9	1,928.3	0.0	Nov.

actually issued by the Bundesbank and the amount disclosed in accordance with the accounting regime chosen by the Eurosystem (see also footnote 2 on banknote circulation in Table III.2). **10** Overnight deposits (excluding central governments' deposits), and (for the euro area) currency in circulation, central governments' overnight monetary liabilities, which are not included in the consolidated balance sheet. **11** M1 plus deposits with agreed maturities of up to two years and at agreed notice of up to three months (excluding central governments' deposits) and (for the euro area) central governments' monetary liabilities with such maturities. **12** M2 plus repo transactions, money market fund shares, money market paper and debt securities up to two years. **13** Deposits with agreed maturities of over two years and at agreed notice of over three months, debt securities with maturities of over two years, capital and reserves. **14** Non-existent in Germany.

II. Overall monetary survey in the euro area

3. Banking systems liquidity position *
Stocks

€ billion; period averages of daily positions

Reserve maintenance period ending in [1]	Liquidity-providing factors					Liquidity-absorbing factors						
		Monetary policy operations of the Eurosystem										
	Net assets in gold and foreign currency	Main refinancing operations	Longer-term refinancing operations	Marginal lending facility	Other liquidity-providing operations [3]	Deposit facility	Other liquidity-absorbing operations [4]	Banknotes in circulation [5]	Central government deposits	Other factors (net) [6]	Credit institutions` current account balances (including minimum reserves) [7]	Base money [8]
Eurosystem [2]												
2019 Dec.	773.3	1.8	663.7	0.0	2,618.8	257.9	0.0	1,262.9	226.6	648.1	1,662.1	3,182.9
2020 Jan.	768.6	2.9	616.1	0.0	2,639.1	254.6	0.0	1,282.2	211.8	654.3	1,623.7	3,160.6
Feb.	.	.	.	.	.	.	.	.	.	.	.	.
Mar.	767.1	1.4	615.9	0.0	2,666.7	244.6	0.0	1,277.1	268.6	618.4	1,642.3	3,164.1
Apr.	.	.	.	.	.	.	.	.	.	.	.	.
May	926.3	0.6	865.7	0.0	2,784.2	271.8	0.0	1,321.9	374.4	788.6	1,820.2	3,413.8
June	950.4	0.3	984.2	0.0	2,986.9	299.9	0.0	1,347.9	477.1	830.5	1,966.5	3,614.4
July	871.3	0.8	1,401.5	0.0	3,168.2	356.0	0.0	1,365.7	671.2	703.1	2,345.9	4,067.5
Aug.	.	.	.	.	.	.	.	.	.	.	.	.
Sep.	865.9	1.3	1,593.2	0.0	3,323.6	413.2	0.0	1,381.2	712.9	651.0	2,625.7	4,420.1
Oct.	.	.	.	.	.	.	.	.	.	.	.	.
Nov.	864.4	1.3	1,707.8	0.0	3,475.8	460.7	0.0	1,389.1	749.0	653.5	2,797.0	4,646.8
Dec.	865.1	0.5	1,754.4	0.0	3,614.7	535.4	0.0	1,403.9	647.0	687.7	2,960.7	4,900.0
2021 Jan.	848.6	0.3	1,792.6	0.0	3,712.9	586.9	0.0	1,429.4	530.3	778.4	3,029.4	5,045.7
Feb.	.	.	.	.	.	.	.	.	.	.	.	.
Mar.	834.9	0.4	1,792.4	0.0	3,825.1	598.0	0.0	1,433.4	595.8	667.9	3,157.7	5,189.1
Apr.	816.7	0.3	2,054.6	0.0	3,951.4	676.4	0.0	1,447.7	644.5	633.4	3,421.1	5,545.2
May	.	.	.	.	.	.	.	.	.	.	.	.
June	809.8	0.2	2,107.0	0.0	4,092.7	706.5	0.0	1,465.8	586.7	659.1	3,591.7	5,763.9
July	821.7	0.1	2,196.0	0.0	4,244.5	736.6	0.0	1,485.8	652.3	734.5	3,653.1	5,875.5
Aug.	.	.	.	.	.	.	.	.	.	.	.	.
Sep.	826.7	0.2	2,213.2	0.0	4,378.9	766.6	0.0	1,499.9	635.7	790.4	3,726.2	5,992.8
Oct.	.	.	.	.	.	.	.	.	.	.	.	.
Nov.	835.1	0.2	2,209.9	0.0	4,512.3	738.5	0.0	1,507.4	671.3	833.7	3,806.5	6,052.4
Dec.	839.2	0.2	2,208.8	0.0	4,655.6	745.0	0.0	1,521.4	628.3	965.7	3,843.3	6,109.7
Deutsche Bundesbank												
2019 Dec.	186.9	0.4	82.4	0.0	566.1	82.2	0.0	307.6	55.9	– 135.3	525.4	915.3
2020 Jan.	186.0	0.9	74.0	0.0	567.9	73.6	0.0	311.7	52.7	– 95.7	486.5	871.8
Feb.	.	.	.	.	.	.	.	.	.	.	.	.
Mar.	185.0	0.4	74.0	0.0	573.7	65.4	0.0	311.2	64.4	– 125.0	517.1	893.7
Apr.	.	.	.	.	.	.	.	.	.	.	.	.
May	238.0	0.2	106.8	0.0	585.3	76.3	0.0	324.1	102.0	– 174.5	602.8	1,003.2
June	248.7	0.1	122.5	0.0	623.1	85.0	0.0	326.4	137.6	– 172.6	618.1	1,029.5
July	222.1	0.5	235.2	0.0	655.9	108.2	0.0	331.5	205.0	– 238.1	707.1	1,146.8
Aug.	.	.	.	.	.	.	.	.	.	.	.	.
Sep.	212.1	0.8	284.0	0.0	692.0	136.0	0.0	336.4	239.6	– 298.0	774.8	1,247.3
Oct.	.	.	.	.	.	.	.	.	.	.	.	.
Nov.	212.1	0.7	319.5	0.0	729.0	145.5	0.0	338.1	254.7	– 302.9	826.0	1,309.6
Dec.	213.0	0.3	333.9	0.0	768.7	166.6	0.0	341.2	217.9	– 294.5	884.7	1,392.5
2021 Jan.	208.3	0.1	341.1	0.0	791.3	178.9	0.0	347.3	189.4	– 252.8	878.0	1,404.2
Feb.	.	.	.	.	.	.	.	.	.	.	.	.
Mar.	205.3	0.1	341.0	0.0	816.9	177.5	0.0	348.3	172.7	– 298.0	962.8	1,488.6
Apr.	198.0	0.0	407.3	0.0	845.8	203.0	0.0	351.7	187.4	– 300.4	1,008.9	1,563.5
May	.	.	.	.	.	.	.	.	.	.	.	.
June	194.3	0.0	420.5	0.0	884.3	208.5	0.0	356.8	187.3	– 301.9	1,046.7	1,612.0
July	197.4	0.0	434.3	0.0	918.5	204.2	0.0	362.0	206.8	– 270.8	1,046.2	1,612.4
Aug.	.	.	.	.	.	.	.	.	.	.	.	.
Sep.	199.0	0.1	436.7	0.0	950.8	210.7	0.0	365.0	204.3	– 240.8	1,045.3	1,621.0
Oct.	.	.	.	.	.	.	.	.	.	.	.	.
Nov.	200.3	0.1	439.1	0.0	978.5	204.4	0.0	367.4	217.7	– 235.2	1,061.6	1,633.3
Dec.	201.3	0.0	440.3	0.0	1,015.8	206.4	0.0	370.9	220.4	– 219.4	1,077.1	1,654.4

Discrepancies may arise from rounding. * The banking system's liquidity position is defined as the current account holdings in euro of euro area credit institutions with the Eurosystem. Amounts are derived from the consolidated financial statement of the Eurosystem and the financial statement of the Bundesbank. **1** Figures are daily averages for the reserve maintenance period ending in the month indicated. Following the changeover in the frequency of Governing Council monetary policy meetings to a six-week cycle, a reserve maintenance period no longer ends in every month. No figures are available in such cases. **2** Source: ECB. **3** Includes liquidity provided under the Eurosystem's asset purchase programmes. **4** From August 2009 includes liquidity absorbed as a result of the Eurosystem's foreign exchange swap operations. **5** From 2002 euro banknotes and other banknotes which have been issued by the national central banks of the Eurosystem and which are still in circulation. In accordance with the accounting procedure chosen by the Eurosystem for the issue of euro banknotes, a share of 8% of the total value of the euro banknotes in circulation is

II. Overall monetary survey in the euro area

Flows

Liquidity-providing factors					Liquidity-absorbing factors							
	Monetary policy operations of the Eurosystem											
Net assets in gold and foreign currency	Main refinancing operations	Longer-term refinancing operations	Marginal lending facility	Other liquidity-providing operations [3]	Deposit facility	Other liquidity-absorbing operations [4]	Banknotes in circulation [5]	Central government deposits	Other factors (net) [6]	Credit institutions' current account balances (including minimum reserves) [7]	Base money [8]	Reserve maintenance period ending in [1]
Eurosystem [2]												
+ 14.8	− 0.2	− 4.8	± 0.0	+ 10.1	− 198.7	± 0.0	+ 10.2	− 72.0	+ 6.8	+ 273.6	+ 85.1	2019 Dec.
− 4.7	+ 1.1	− 47.6	± 0.0	+ 20.3	− 3.3	± 0.0	+ 19.3	− 14.8	+ 6.2	− 38.4	− 22.3	2020 Jan.
.	.	.	.	.	.	.	.	.	.	.	.	Feb.
− 1.5	− 1.5	− 0.2	± 0.0	+ 27.6	− 10.0	± 0.0	− 5.1	+ 56.8	− 35.9	+ 18.6	+ 3.5	Mar.
.	.	.	.	.	.	.	.	.	.	.	.	Apr.
+ 159.2	− 0.8	+ 249.8	± 0.0	+ 117.5	+ 27.2	± 0.0	+ 44.8	+105.8	+ 170.2	+ 177.9	+ 249.7	May
+ 24.1	− 0.3	+ 118.5	± 0.0	+ 202.7	+ 28.1	± 0.0	+ 26.0	+102.7	+ 41.9	+ 146.3	+ 200.6	June
− 79.1	+ 0.5	+ 417.3	± 0.0	+ 181.3	+ 56.1	± 0.0	+ 17.8	+194.1	− 127.4	+ 379.4	+ 453.1	July
.	.	.	.	.	.	.	.	.	.	.	.	Aug.
− 5.4	+ 0.5	+ 191.7	± 0.0	+ 155.4	+ 57.2	± 0.0	+ 15.5	+ 41.7	− 52.1	+ 279.8	+ 352.6	Sep.
.	.	.	.	.	.	.	.	.	.	.	.	Oct.
− 1.5	± 0.0	+ 114.6	± 0.0	+ 152.2	+ 47.5	± 0.0	+ 7.9	+ 36.1	+ 2.5	+ 171.3	+ 226.7	Nov.
+ 0.7	− 0.8	+ 46.6	± 0.0	+ 138.9	+ 74.7	± 0.0	+ 14.8	−102.0	+ 34.2	+ 163.7	+ 253.2	Dec.
− 16.5	− 0.2	+ 38.2	± 0.0	+ 98.2	+ 51.5	± 0.0	+ 25.5	−116.7	+ 90.7	+ 68.7	+ 145.7	2021 Jan.
.	.	.	.	.	.	.	.	.	.	.	.	Feb.
− 13.7	+ 0.1	− 0.2	± 0.0	+ 112.2	+ 11.1	± 0.0	+ 4.0	+ 65.5	− 110.5	+ 128.3	+ 143.4	Mar.
− 18.2	− 0.1	+ 262.2	± 0.0	+ 126.3	+ 78.4	± 0.0	+ 14.3	+ 48.7	− 34.5	+ 263.4	+ 356.1	Apr.
.	.	.	.	.	.	.	.	.	.	.	.	May
− 6.9	− 0.1	+ 52.4	± 0.0	+ 141.3	+ 30.1	± 0.0	+ 18.1	− 57.8	+ 25.7	+ 170.6	+ 218.7	June
+ 11.9	− 0.1	+ 89.0	± 0.0	+ 151.8	+ 30.1	± 0.0	+ 20.0	+ 65.6	+ 75.4	+ 61.4	+ 111.6	July
.	.	.	.	.	.	.	.	.	.	.	.	Aug.
+ 5.0	+ 0.1	+ 17.2	± 0.0	+ 134.4	+ 30.0	± 0.0	+ 14.1	− 16.6	+ 55.9	+ 73.1	+ 117.3	Sep.
.	.	.	.	.	.	.	.	.	.	.	.	Oct.
+ 8.4	± 0.0	− 3.3	± 0.0	+ 133.4	− 28.1	± 0.0	+ 7.5	+ 35.6	+ 43.3	+ 80.3	+ 59.6	Nov.
+ 4.1	± 0.0	− 1.1	± 0.0	+ 143.3	+ 6.5	± 0.0	+ 14.0	− 43.0	+ 132.0	+ 36.8	+ 57.3	Dec.
Deutsche Bundesbank												
+ 4.1	+ 0.0	− 0.4	+ 0.0	+ 6.1	− 69.3	± 0.0	+ 1.1	− 14.9	+ 24.1	+ 68.8	+ 0.6	2019 Dec.
− 0.9	+ 0.4	− 8.5	+ 0.0	+ 1.8	− 8.6	± 0.0	+ 4.1	− 3.2	+ 39.6	− 38.9	− 43.5	2020 Jan.
.	.	.	.	.	.	.	.	.	.	.	.	Feb.
− 1.0	− 0.5	+ 0.0	− 0.0	+ 5.8	− 8.2	± 0.0	− 0.5	+ 11.7	− 29.3	+ 30.7	+ 21.9	Mar.
.	.	.	.	.	.	.	.	.	.	.	.	Apr.
+ 53.0	− 0.2	+ 32.9	− 0.0	+ 11.6	+ 10.9	± 0.0	+ 12.9	+ 37.6	− 49.6	+ 85.6	+ 109.5	May
+ 10.7	− 0.1	+ 15.7	+ 0.0	+ 37.8	+ 8.7	± 0.0	+ 2.3	+ 35.6	+ 2.0	+ 15.3	+ 26.3	June
− 26.6	+ 0.4	+ 112.6	− 0.0	+ 32.8	+ 23.2	± 0.0	+ 5.1	+ 67.5	− 65.5	+ 89.0	+ 117.3	July
.	.	.	.	.	.	.	.	.	.	.	.	Aug.
− 10.0	+ 0.3	+ 48.9	+ 0.0	+ 36.1	+ 27.9	± 0.0	+ 5.0	+ 34.6	− 59.9	+ 67.6	+ 100.5	Sep.
.	.	.	.	.	.	.	.	.	.	.	.	Oct.
+ 0.0	− 0.1	+ 35.5	− 0.0	+ 37.0	+ 9.5	± 0.0	+ 1.7	+ 15.0	− 5.0	+ 51.2	+ 62.3	Nov.
+ 0.9	− 0.4	+ 14.4	+ 0.0	+ 39.8	+ 21.1	± 0.0	+ 3.1	− 36.8	+ 8.4	+ 58.7	+ 82.9	Dec.
− 4.7	− 0.2	+ 7.1	+ 0.0	+ 22.6	+ 12.3	± 0.0	+ 6.1	− 28.5	+ 41.7	− 6.7	+ 11.7	2021 Jan.
.	.	.	.	.	.	.	.	.	.	.	.	Feb.
− 3.0	− 0.0	− 0.1	− 0.0	+ 25.6	− 1.4	± 0.0	+ 1.0	− 16.7	− 45.2	+ 84.8	+ 84.4	Mar.
− 7.3	− 0.1	+ 66.3	+ 0.0	+ 28.8	+ 25.5	± 0.0	+ 3.4	+ 14.7	− 2.4	+ 46.0	+ 74.9	Apr.
.	.	.	.	.	.	.	.	.	.	.	.	May
− 3.7	+ 0.0	+ 13.2	+ 0.0	+ 38.6	+ 5.5	± 0.0	+ 5.1	− 0.1	− 1.5	+ 37.9	+ 48.5	June
+ 3.1	− 0.0	+ 13.8	− 0.0	+ 34.2	− 4.3	± 0.0	+ 5.2	+ 19.4	+ 31.1	− 0.5	+ 0.4	July
.	.	.	.	.	.	.	.	.	.	.	.	Aug.
+ 1.6	+ 0.1	+ 2.4	+ 0.0	+ 32.3	+ 6.5	± 0.0	+ 3.0	− 2.5	+ 29.9	− 0.9	+ 8.6	Sep.
.	.	.	.	.	.	.	.	.	.	.	.	Oct.
+ 1.3	+ 0.0	+ 2.4	− 0.0	+ 27.8	− 6.4	± 0.0	+ 2.4	+ 13.4	+ 5.7	+ 16.3	+ 12.3	Nov.
+ 1.0	− 0.1	+ 1.2	− 0.0	+ 37.3	+ 2.1	± 0.0	+ 3.5	+ 2.7	+ 15.7	+ 15.6	+ 21.1	Dec.

allocated to the ECB on a monthly basis. The counterpart of this adjustment is shown under "Other factors". The remaining 92% of the value of the euro banknotes in circulation is allocated, likewise on a monthly basis, to the NCBs, with each NCB showing in its balance sheet the share of the euro banknotes issued corresponding to its paid-up share in the ECB's capital. The difference between the value of the euro banknotes allocated to an NCB and the value of the euro banknotes which that NCB has put into circulation is likewise shown under "Other factors". From 2003 euro banknotes only. **6** Remaining items in the consolidated financial statement of the Eurosystem and the financial statement of the Bundesbank. **7** Equal to the difference between the sum of liquidity-pro viding factors and the sum of liquidity-absorbing factors. **8** Calculated as the sum of the "Deposit facility", "Banknotes in circulation" and "Credit institutions' current account balances".

III. Consolidated financial statement of the Eurosystem

1. Assets *

€ billion

As at reporting date	Total assets	Gold and gold receivables	Claims on non-euro area residents denominated in foreign currency			Claims on euro area residents denominated in foreign currency	Claims on non-euro area residents denominated in euro		
			Total	Receivables from the IMF	Balances with banks, security investments, external loans and other external assets		Total	Balances with banks, security investments and loans	Claims arising from the credit facility under ERM II
Eurosystem [1]									
2021 June 18	7,736.5	499.2	358.8	87.1	271.8	24.7	10.6	10.6	–
25	7,877.1	499.2	359.9	87.0	272.9	23.8	13.5	13.5	–
July 2	7,907.8	514.7	354.5	87.1	267.5	25.6	13.1	13.1	–
9	7,926.6	514.7	355.1	87.1	268.0	24.8	10.7	10.7	–
16	7,950.7	514.7	354.9	87.1	267.9	25.4	10.3	10.3	–
23	7,988.0	514.7	354.0	87.2	266.7	26.6	10.9	10.9	–
30	7,987.4	514.7	354.8	87.2	267.5	25.3	10.3	10.3	–
Aug. 6	8,009.7	514.7	354.8	87.3	267.4	25.4	10.5	10.5	–
13	8,036.0	514.7	355.5	87.3	268.2	24.5	10.6	10.6	–
20	8,052.8	514.7	355.7	87.3	268.4	24.2	10.6	10.6	–
27	8,191.3	514.7	477.1	209.7	267.4	25.0	10.8	10.8	–
Sep. 3	8,207.5	514.7	477.3	209.7	267.6	24.8	11.1	11.1	–
10	8,222.7	514.7	477.6	210.1	267.5	24.9	10.6	10.6	–
17	8,244.6	514.7	475.3	210.9	264.4	27.6	11.8	11.8	–
24	8,273.2	514.7	475.6	211.2	264.4	27.6	13.7	13.7	–
Oct. 1	8,289.1	517.8	487.7	213.4	274.3	24.9	10.7	10.7	–
8	8,314.3	517.8	488.0	213.6	274.4	24.9	10.7	10.7	–
15	8,336.7	517.8	488.7	213.6	275.1	24.3	10.7	10.7	–
22	8,368.3	517.8	489.7	214.0	275.6	24.3	10.9	10.9	–
29	8,366.1	517.9	489.0	214.9	274.1	24.5	10.8	10.8	–
Nov. 5	8,382.7	517.9	489.9	215.1	274.8	24.1	10.5	10.5	–
12	8,404.8	517.9	489.7	214.9	274.8	24.0	11.0	11.0	–
19	8,442.3	517.9	490.7	214.9	275.8	25.5	10.7	10.7	–
26	8,457.0	517.9	490.7	214.9	275.8	26.1	10.4	10.4	–
Dec. 3	8,469.9	517.9	490.8	214.9	275.9	24.3	10.0	10.0	–
10	8,496.6	517.9	490.9	215.2	275.7	24.6	11.5	11.5	–
17	8,511.5	517.9	490.6	215.3	275.3	24.4	11.6	11.6	–
24	8,512.3	517.9	491.3	215.6	275.7	24.7	13.3	13.3	–
31	8,566.4	559.4	500.1	218.9	281.2	24.6	13.0	13.0	–
2022 Jan. 7	8,573.3	559.4	497.2	218.9	278.3	26.1	10.0	10.0	–
Deutsche Bundesbank									
2021 June 18	2,608.1	155.2	54.0	22.4	31.6	0.0	–	–	–
25	2,648.6	155.2	54.0	22.3	31.7	0.0	–	–	–
July 2	2,679.7	160.0	53.8	22.4	31.4	0.0	–	–	–
9	2,640.1	160.0	53.8	22.4	31.3	0.0	–	–	–
16	2,668.1	160.0	53.8	22.4	31.3	0.0	–	–	–
23	2,665.0	160.0	53.8	22.4	31.3	0.0	0.3	0.3	–
30	2,659.0	160.0	53.7	22.4	31.3	0.0	0.1	0.1	–
Aug. 6	2,687.1	160.0	53.7	22.5	31.2	0.0	–	–	–
13	2,696.2	160.0	53.6	22.5	31.2	0.0	–	–	–
20	2,694.4	160.0	53.7	22.5	31.2	0.0	–	–	–
27	2,724.3	160.0	84.7	53.4	31.3	0.0	0.0	0.0	–
Sep. 3	2,749.6	160.0	85.0	53.4	31.6	0.0	0.6	0.6	–
10	2,747.9	160.0	84.7	53.4	31.3	0.0	–	–	–
17	2,749.3	160.0	84.6	53.4	31.2	0.0	0.4	0.4	–
24	2,782.2	160.0	84.6	53.4	31.2	0.0	0.3	0.3	–
Oct. 1	2,794.1	160.9	86.0	53.9	32.1	0.0	–	–	–
8	2,793.0	160.9	86.2	53.9	32.3	0.0	–	–	–
15	2,797.4	160.9	86.5	53.9	32.6	0.0	0.3	0.3	–
22	2,780.9	160.9	86.7	54.1	32.6	0.0	0.1	0.1	–
29	2,788.5	160.9	86.2	54.3	32.0	0.0	–	–	–
Nov. 5	2,812.8	160.9	86.7	54.3	32.4	0.0	0.3	0.3	–
12	2,826.1	160.9	86.7	54.1	32.6	0.0	0.1	0.1	–
19	2,866.9	160.9	87.1	54.1	33.1	0.0	0.4	0.4	–
26	2,865.0	160.9	87.3	54.1	33.2	0.0	0.2	0.2	–
Dec. 3	2,889.6	160.9	86.9	54.1	32.9	0.0	–	–	–
10	2,929.3	160.9	86.4	54.1	32.3	0.0	–	–	–
17	2,960.9	160.9	86.2	54.1	32.1	0.0	–	–	–
24	2,968.1	160.9	86.2	54.1	32.1	0.0	–	–	–
31	3,012.2	173.8	87.6	54.9	32.6	0.0	–	–	–
2022 Jan. 7	2,942.1	173.8	87.9	54.9	33.0	0.0	–	–	–

***** The consolidated financial statement of the Eurosystem comprises the financial statement of the European Central Bank (ECB) and the financial statements of the national central banks of the euro area Member States (NCBs). The balance sheet items for foreign currency, securities, gold and financial instruments are valued at the end of the quarter. **1** Source: ECB.

III. Consolidated financial statement of the Eurosystem

Lending to euro area credit institutions related to monetary policy operations denominated in euro							Other claims on euro area credit institutions denominated in euro	Securities of euro area residents in euro			General government debt denominated in euro	Other assets	As at reporting date
Total	Main refinancing operations	Longer-term refinancing operations	Fine-tuning reverse operations	Structural reverse operations	Marginal lending facility	Credits related to margin calls		Total	Securities held for monetary policy purposes	Other securities			
Eurosystem [1]													
2,107.1	0.1	2,107.0	–	–	–	–	35.4	4,368.4	4,182.6	185.8	22.6	309.7	2021 June 18
2,217.3	0.1	2,217.2	–	–	0.0	–	33.7	4,400.5	4,214.5	186.0	22.6	306.6	25
2,217.3	0.1	2,217.2	–	–	0.0	–	35.1	4,414.5	4,228.2	186.2	22.1	311.0	July 2
2,216.8	0.1	2,216.7	–	–	–	–	32.9	4,438.5	4,252.3	186.2	22.1	310.9	9
2,216.8	0.0	2,216.7	–	–	–	–	31.7	4,466.7	4,280.2	186.6	22.1	308.1	16
2,216.8	0.1	2,216.7	–	–	–	–	31.2	4,499.4	4,313.0	186.4	22.1	312.3	23
2,214.3	0.1	2,214.1	–	–	0.1	–	34.2	4,509.0	4,322.0	187.1	22.1	302.6	30
2,214.2	0.1	2,214.1	–	–	–	–	32.3	4,526.9	4,341.1	185.8	22.1	308.8	Aug. 6
2,214.2	0.2	2,214.1	–	–	–	–	33.2	4,549.7	4,363.9	185.8	22.1	311.3	13
2,214.3	0.2	2,214.1	–	–	–	–	32.1	4,571.2	4,384.6	186.6	22.1	307.8	20
2,212.4	0.1	2,212.3	–	–	–	–	34.6	4,584.6	4,398.5	186.1	22.1	310.0	27
2,211.5	0.0	2,211.4	–	–	–	–	35.4	4,596.1	4,412.8	183.2	22.1	314.6	Sep. 3
2,211.8	0.3	2,211.4	–	–	0.0	–	32.9	4,613.1	4,430.7	182.4	22.1	315.1	10
2,211.8	0.3	2,211.4	–	–	–	–	35.0	4,633.9	4,452.2	181.6	22.1	312.4	17
2,211.3	0.0	2,211.3	–	–	0.0	–	35.4	4,660.9	4,478.7	182.3	22.1	311.8	24
2,208.8	0.1	2,208.7	–	–	–	–	33.1	4,666.5	4,484.2	182.3	22.2	317.5	Oct. 1
2,208.9	0.2	2,208.6	–	–	–	–	29.8	4,689.7	4,507.6	182.1	22.2	322.4	8
2,208.8	0.2	2,208.6	–	–	0.0	–	31.0	4,714.4	4,532.6	181.8	22.2	318.9	15
2,208.7	0.1	2,208.6	–	–	–	–	30.2	4,743.0	4,560.7	182.3	22.2	321.4	22
2,208.8	0.1	2,208.7	–	–	0.0	–	26.5	4,745.7	4,568.3	177.4	22.2	320.8	29
2,208.7	0.1	2,208.7	–	–	–	–	26.1	4,764.8	4,586.6	178.2	22.2	318.5	Nov. 5
2,208.9	0.3	2,208.7	–	–	–	–	23.1	4,789.0	4,611.1	177.8	22.2	319.1	12
2,208.8	0.2	2,208.7	–	–	0.0	–	31.9	4,818.4	4,640.4	178.0	22.2	316.2	19
2,208.8	0.2	2,208.6	–	–	–	–	27.4	4,838.6	4,662.5	176.1	22.2	314.9	26
2,208.8	0.2	2,208.6	–	–	–	–	27.3	4,851.0	4,676.0	175.0	22.2	317.5	Dec. 3
2,208.8	0.2	2,208.6	–	–	0.0	–	29.9	4,874.9	4,699.9	175.0	22.2	315.9	10
2,209.8	0.1	2,209.7	–	–	–	–	32.0	4,885.9	4,713.7	172.2	22.2	317.0	17
2,201.7	0.2	2,201.5	–	–	–	–	28.4	4,896.6	4,723.8	172.8	22.2	316.2	24
2,201.9	0.4	2,201.5	–	–	–	–	26.6	4,886.5	4,713.5	173.0	22.2	332.3	31
2,201.9	0.4	2,201.5	–	–	–	–	30.7	4,896.1	4,723.1	173.0	22.2	329.8	2022 Jan. 7
Deutsche Bundesbank													
420.5	0.0	420.5	–	–	0.0	–	6.9	903.4	903.4	–	4.4	1,063.7	2021 June 18
437.6	0.0	437.6	–	–	0.0	–	5.1	912.4	912.4	–	4.4	1,079.9	25
437.5	–	437.5	–	–	0.0	–	5.8	917.1	917.1	–	4.4	1,101.0	July 2
437.5	0.0	437.5	–	–	0.0	–	4.6	917.1	917.1	–	4.4	1,062.6	9
437.5	0.0	437.5	–	–	–	–	6.3	927.1	927.1	–	4.4	1,078.9	16
437.6	0.0	437.5	–	–	0.0	–	7.1	935.9	935.9	–	4.4	1,065.9	23
437.2	0.1	437.1	–	–	0.1	–	8.3	938.4	938.4	–	4.4	1,056.9	30
437.1	0.0	437.1	–	–	0.0	–	8.7	943.1	943.1	–	4.4	1,080.0	Aug. 6
437.2	0.1	437.1	–	–	0.0	–	7.9	948.9	948.9	–	4.4	1,084.1	13
437.2	0.1	437.1	–	–	0.0	–	7.6	954.9	954.9	–	4.4	1,076.5	20
436.3	0.0	436.3	–	–	0.0	–	8.2	954.6	954.6	–	4.4	1,075.9	27
436.2	–	436.2	–	–	0.0	–	10.8	960.0	960.0	–	4.4	1,092.6	Sep. 3
436.5	0.3	436.2	–	–	0.0	–	8.6	957.0	957.0	–	4.4	1,096.6	10
436.5	0.3	436.2	–	–	0.0	–	8.3	963.9	963.9	–	4.4	1,091.2	17
436.2	0.0	436.2	–	–	0.0	–	7.6	972.9	972.9	–	4.4	1,116.2	24
440.4	0.1	440.3	–	–	0.0	–	5.8	973.0	973.0	–	4.4	1,123.5	Oct. 1
440.4	0.2	440.3	–	–	0.0	–	7.1	973.7	973.7	–	4.4	1,120.2	8
440.4	0.2	440.3	–	–	0.0	–	6.2	981.9	981.9	–	4.4	1,116.7	15
440.3	0.1	440.3	–	–	0.0	–	7.8	989.5	989.5	–	4.4	1,091.1	22
440.3	0.1	440.3	–	–	0.0	–	6.4	992.1	992.1	–	4.4	1,097.9	29
440.3	0.0	440.3	–	–	0.0	–	5.6	1,000.2	1,000.2	–	4.4	1,114.4	Nov. 5
440.4	0.1	440.3	–	–	0.0	–	5.2	1,006.1	1,006.1	–	4.4	1,122.4	12
440.4	0.1	440.3	–	–	0.0	–	5.7	1,013.5	1,013.5	–	4.4	1,154.4	19
440.3	0.0	440.3	–	–	0.0	–	4.2	1,015.0	1,015.0	–	4.4	1,152.7	26
440.3	0.0	440.3	–	–	0.0	–	4.4	1,021.8	1,021.8	–	4.4	1,170.8	Dec. 3
440.3	0.0	440.3	–	–	0.0	–	5.5	1,025.5	1,025.5	–	4.4	1,206.2	10
440.6	0.0	440.6	–	–	0.0	–	5.0	1,027.6	1,027.6	–	4.4	1,236.2	17
421.8	0.2	421.7	–	–	0.0	–	4.3	1,029.6	1,029.6	–	4.4	1,260.7	24
422.0	0.3	421.7	–	–	0.0	–	3.5	1,027.7	1,027.7	–	4.4	1,293.1	31
422.0	0.3	421.7	–	–	0.0	–	4.0	1,025.3	1,025.3	–	4.4	1,224.6	2022 Jan. 7

III. Consolidated financial statement of the Eurosystem

2. Liabilities *

€ billion

As at reporting date		Total liabilities	Banknotes in circulation [1]	Liabilities to euro area credit institutions related to monetary policy operations denominated in euro						Other liabilities to euro area credit institutions denominated in euro	Debt certificates issued	Liabilities to other euro area residents denominated in euro		
				Total	Current accounts (covering the minimum reserve system)	Deposit facility	Fixed-term deposits	Fine-tuning reverse operations	Deposits related to margin calls			Total	General government	Other liabilities
Eurosystem [3]														
2021 June	18	7,736.5	1,477.4	4,271.6	3,739.2	530.7	–	–	1.7	18.7	–	775.8	668.9	106.9
	25	7,877.1	1,479.6	4,377.8	3,691.7	684.3	–	–	1.8	21.7	–	780.5	683.2	97.3
July	2	7,907.8	1,484.5	4,441.8	3,653.2	786.8	–	–	1.8	22.3	–	712.6	616.0	96.6
	9	7,926.6	1,488.7	4,465.0	3,671.5	791.6	–	–	1.8	18.1	–	693.5	600.2	93.4
	16	7,950.7	1,491.7	4,430.6	3,610.6	818.1	–	–	1.9	20.8	–	752.2	650.5	101.8
	23	7,988.0	1,494.0	4,391.4	3,605.7	783.9	–	–	1.8	23.1	–	807.7	702.5	105.2
	30	7,987.4	1,497.9	4,440.0	3,756.8	681.0	–	–	2.3	25.8	–	732.8	618.6	114.2
Aug.	6	8,009.7	1,499.6	4,492.6	3,758.1	732.2	–	–	2.3	23.1	–	699.2	584.6	114.6
	13	8,036.0	1,500.7	4,488.3	3,674.7	811.4	–	–	2.2	23.7	–	751.3	635.3	116.0
	20	8,052.8	1,499.9	4,471.8	3,665.0	804.7	–	–	2.0	24.3	–	803.8	681.1	122.7
	27	8,191.3	1,500.1	4,454.5	3,663.0	789.2	–	–	2.3	23.2	–	828.0	703.6	124.3
Sep.	3	8,207.5	1,500.8	4,543.2	3,728.0	813.0	–	–	2.3	30.5	–	736.3	617.5	118.8
	10	8,222.7	1,502.0	4,567.5	3,744.0	821.4	–	–	2.1	23.6	–	731.8	617.6	114.3
	17	8,244.6	1,504.0	4,523.1	3,941.3	579.7	–	–	2.0	23.6	–	792.0	671.0	120.9
	24	8,273.2	1,504.3	4,476.0	3,787.8	686.2	–	–	2.0	26.2	–	845.4	731.9	113.5
Oct.	1	8,289.1	1,505.5	4,534.9	3,761.3	771.1	–	–	2.5	26.6	–	775.7	653.4	122.2
	8	8,314.3	1,507.8	4,588.3	3,806.2	779.6	–	–	2.5	25.7	–	749.4	626.2	123.2
	15	8,336.7	1,509.0	4,564.0	3,786.5	775.1	–	–	2.4	27.0	–	793.5	670.9	122.6
	22	8,368.3	1,509.9	4,575.1	3,805.2	767.6	–	–	2.4	26.3	–	799.8	679.3	120.6
	29	8,366.1	1,513.3	4,567.8	3,759.9	805.6	–	–	2.3	30.4	–	785.0	661.1	123.9
Nov.	5	8,382.7	1,514.6	4,642.7	4,023.0	617.5	–	–	2.2	36.0	–	705.3	587.5	117.9
	12	8,404.8	1,515.5	4,636.0	3,902.5	731.4	–	–	2.1	34.9	–	711.8	596.1	115.7
	19	8,442.3	1,516.3	4,557.0	3,787.1	767.8	–	–	2.1	39.9	–	809.5	686.6	123.0
	26	8,457.0	1,518.3	4,539.6	3,766.0	771.5	–	–	2.1	37.3	–	831.1	707.8	123.3
Dec.	3	8,469.9	1,523.3	4,623.1	3,827.4	793.6	–	–	2.1	40.1	–	735.9	620.4	115.5
	10	8,496.6	1,528.2	4,600.8	3,813.2	785.4	–	–	2.2	43.7	–	738.5	612.6	125.9
	17	8,511.5	1,534.3	4,504.7	3,743.2	759.3	–	–	2.2	51.4	–	760.0	616.8	143.2
	24	8,512.3	1,543.0	4,439.9	3,759.0	678.7	–	–	2.2	53.6	–	751.5	593.5	158.0
	31	8,566.4	1,544.4	4,293.9	3,512.2	779.6	–	–	2.2	76.7	–	757.1	590.4	166.7
2022 Jan.	7	8,573.3	1,541.6	4,541.5	3,894.0	644.5	–	–	2.9	49.4	–	668.3	510.1	158.2
Deutsche Bundesbank														
2021 June	18	2,608.1	360.2	1,224.5	1,085.7	137.0	–	–	1.7	7.9	–	230.2	215.5	14.8
	25	2,648.6	361.1	1,249.1	1,086.0	161.4	–	–	1.8	10.1	–	241.3	226.9	14.4
July	2	2,679.7	360.3	1,280.8	1,050.0	229.1	–	–	1.8	9.8	–	220.9	204.6	16.3
	9	2,640.1	362.1	1,265.0	1,042.1	221.1	–	–	1.8	7.0	–	194.4	178.7	15.7
	16	2,668.1	363.6	1,253.6	1,022.7	229.1	–	–	1.8	9.1	–	227.6	212.5	15.1
	23	2,665.0	364.7	1,243.3	1,010.4	231.1	–	–	1.8	11.4	–	230.8	215.5	15.3
	30	2,659.0	363.3	1,249.8	1,055.6	192.0	–	–	2.2	12.7	–	206.4	189.2	17.2
Aug.	6	2,687.1	364.3	1,278.2	1,117.5	158.5	–	–	2.2	11.4	–	203.9	188.3	15.6
	13	2,696.2	365.0	1,255.4	1,025.3	227.8	–	–	2.2	11.6	–	233.1	216.0	17.1
	20	2,694.4	365.2	1,246.9	1,024.4	220.4	–	–	2.0	13.5	–	238.5	223.2	15.3
	27	2,724.3	366.3	1,234.2	1,008.2	223.6	–	–	2.3	11.9	–	244.1	227.6	16.4
Sep.	3	2,749.6	364.8	1,281.0	1,037.1	241.7	–	–	2.3	17.8	–	213.1	196.5	16.6
	10	2,747.9	366.0	1,273.8	1,031.0	240.7	–	–	2.1	11.4	–	217.7	200.2	17.5
	17	2,749.3	368.2	1,242.4	1,100.6	139.8	–	–	2.0	11.7	–	252.3	233.1	19.2
	24	2,782.2	368.6	1,257.9	1,096.0	159.9	–	–	2.0	13.9	–	260.8	238.6	22.2
Oct.	1	2,794.1	365.4	1,281.8	1,055.8	223.5	–	–	2.5	14.8	–	235.1	208.2	26.9
	8	2,793.0	366.4	1,292.0	1,062.4	227.0	–	–	2.5	14.6	–	225.8	194.2	31.6
	15	2,797.4	367.4	1,262.9	1,041.7	218.9	–	–	2.4	15.0	–	254.1	224.1	30.0
	22	2,780.9	368.0	1,254.4	1,039.1	212.9	–	–	2.3	15.7	–	247.2	218.8	28.4
	29	2,788.5	367.0	1,281.6	1,046.1	233.2	–	–	2.3	18.4	–	217.3	188.7	28.6
Nov.	5	2,812.8	367.7	1,304.3	1,158.7	143.4	–	–	2.2	19.0	–	212.7	185.7	27.0
	12	2,826.1	369.2	1,292.1	1,124.8	165.2	–	–	2.1	18.2	–	221.4	194.2	27.2
	19	2,866.9	370.1	1,285.9	1,062.8	221.0	–	–	2.1	20.1	–	260.8	230.5	30.3
	26	2,865.0	371.6	1,274.5	1,057.7	214.7	–	–	2.1	16.4	–	267.4	236.9	30.5
Dec.	3	2,889.6	370.1	1,300.1	1,066.5	231.5	–	–	2.1	15.7	–	251.2	220.0	31.2
	10	2,929.3	372.4	1,293.6	1,054.4	237.0	–	–	2.2	15.9	–	267.8	230.5	37.3
	17	2,960.9	375.8	1,229.9	1,017.3	210.4	–	–	2.1	17.5	–	310.5	260.9	49.5
	24	2,968.1	378.9	1,193.5	975.4	215.9	–	–	2.1	13.7	–	309.4	248.9	60.5
	31	3,012.2	374.6	1,138.2	902.1	233.9	–	–	2.2	27.0	–	298.9	246.7	52.2
2022 Jan.	7	2,942.1	373.3	1,233.9	1,085.0	146.6	–	–	2.2	19.5	–	245.4	193.0	52.3

***** The consolidated financial statement of the Eurosystem comprises the financial statement of the European Central Bank (ECB) and the financial statements of the national central banks of the euro area Member States (NCBs). The balance sheet items for foreign currency, securities, gold and financial instruments are valued at market rates at the end of the quarrter. **1** In accordance with the accounting procedure chosen by the Eurosystem for the issue of euro banknotes, a share of 8% of the total value of the euro banknotes in circulation is allocated to the ECB on a monthy basis. The counterpart of this adjustment is disclosed as an "Intra-Eurosystem liability related to

III. Consolidated financial statement of the Eurosystem

Liabilities to non-euro area residents denominated in euro	Liabilities to euro area residents in foreign currency	Liabilities to non-euro area residents denominated in foreign currency			Counterpart of special drawing rights allocated by the IMF	Other liabilities [2]	Intra-Eurosystem liability related to euro banknote issue [1]	Revaluation accounts	Capital and reserves	As at reporting date
		Total	Deposits, balances and other liabilities	Liabilities arising from the credit facility under ERM II						
Eurosystem [3]										
218.2	11.4	2.5	2.5	–	56.2	309.9	–	485.4	109.5	2021 June 18
242.2	11.1	2.9	2.9	–	56.2	310.2	–	485.4	109.5	25
264.5	10.4	2.7	2.7	–	55.8	306.1	–	497.6	109.5	July 2
278.5	10.3	2.7	2.7	–	55.8	306.9	–	497.6	109.5	9
277.6	10.3	2.5	2.5	–	55.8	302.1	–	497.6	109.5	16
292.9	10.2	2.4	2.4	–	55.8	303.4	–	497.6	109.5	23
312.3	9.9	2.7	2.7	–	55.8	303.1	–	497.6	109.4	30
312.4	9.9	2.7	2.7	–	55.8	307.3	–	497.6	109.4	Aug. 6
286.1	9.8	2.6	2.6	–	55.8	310.6	–	497.6	109.4	13
270.4	9.4	2.8	2.8	–	55.8	307.7	–	497.6	109.4	20
279.4	12.4	3.0	3.0	–	174.7	309.0	–	497.6	109.4	27
286.0	12.3	2.9	2.9	–	174.7	313.9	–	497.6	109.4	Sep. 3
286.7	12.4	2.8	2.8	–	174.7	314.3	–	497.6	109.4	10
288.1	12.3	2.4	2.4	–	174.7	317.6	–	497.6	109.4	17
306.2	12.2	2.5	2.5	–	174.7	318.9	–	497.6	109.4	24
323.5	12.6	4.1	4.1	–	176.1	314.9	–	506.0	109.4	Oct. 1
319.5	12.5	4.3	4.3	–	176.1	315.4	–	506.0	109.4	8
318.7	12.3	4.5	4.5	–	176.1	316.2	–	506.0	109.4	15
331.7	12.4	4.9	4.9	–	176.1	316.7	–	506.0	109.4	22
344.3	13.1	3.5	3.5	–	176.1	317.3	–	506.0	109.4	29
353.6	13.0	3.2	3.2	–	176.1	322.9	–	506.0	109.3	Nov. 5
377.7	12.8	3.4	3.4	–	176.1	321.3	–	506.0	109.3	12
385.8	15.0	3.8	3.8	–	176.1	323.5	–	506.0	109.3	19
399.5	15.7	3.8	3.8	–	176.1	320.2	–	506.0	109.3	26
417.3	14.2	3.8	3.8	–	176.1	320.8	–	506.0	109.3	Dec. 3
455.1	14.2	3.9	3.9	–	176.1	320.9	–	506.0	109.3	10
531.7	13.8	3.8	3.8	–	176.1	320.4	–	506.0	109.3	17
593.0	14.2	3.5	3.5	–	176.1	322.3	–	506.0	109.3	24
710.0	14.1	2.7	2.7	–	178.8	324.6	–	554.8	109.3	31
586.8	14.4	3.5	3.5	–	178.8	324.6	–	554.8	109.6	2022 Jan. 7
Deutsche Bundesbank										
96.2	0.3	0.0	0.0	–	14.6	34.5	482.8	151.2	5.7	2021 June 18
97.5	0.2	0.2	0.2	–	14.6	34.8	482.8	151.2	5.7	25
112.0	0.4	–	–	–	14.5	33.9	485.9	155.5	5.7	July 2
113.8	0.4	–	–	–	14.5	35.6	485.9	155.5	5.7	9
116.6	0.4	–	–	–	14.5	35.6	485.9	155.5	5.7	16
117.1	0.4	–	–	–	14.5	35.7	485.9	155.5	5.7	23
124.6	0.4	–	–	–	14.5	36.2	490.0	155.5	5.7	30
127.1	0.3	–	–	–	14.5	36.1	490.0	155.5	5.7	Aug. 6
128.9	0.3	–	–	–	14.5	36.1	490.0	155.5	5.7	13
128.0	0.3	–	–	–	14.5	36.3	490.0	155.5	5.7	20
134.4	0.3	–	–	–	45.4	36.4	490.0	155.5	5.7	27
136.6	0.3	0.2	0.2	–	45.4	36.2	492.9	155.5	5.7	Sep. 3
142.0	0.2	0.0	0.0	–	45.4	37.2	492.9	155.5	5.7	10
137.4	0.1	0.0	0.0	–	45.4	37.7	492.9	155.5	5.7	17
143.5	0.1	0.0	0.0	–	45.4	37.7	492.9	155.5	5.7	24
155.1	0.3	–	–	–	45.8	35.4	497.5	157.2	5.7	Oct. 1
151.9	0.3	0.2	0.2	–	45.8	35.6	497.5	157.2	5.7	8
155.4	0.3	0.5	0.5	–	45.8	35.6	497.5	157.2	5.7	15
152.7	0.3	0.5	0.5	–	45.8	35.7	497.5	157.2	5.7	22
157.9	0.3	0.3	0.3	–	45.8	36.1	500.8	157.2	5.7	29
162.7	0.3	0.4	0.4	–	45.8	36.2	500.8	157.2	5.7	Nov. 5
178.9	0.3	0.4	0.4	–	45.8	36.3	500.8	157.2	5.7	12
183.1	0.3	0.8	0.8	–	45.8	36.3	500.8	157.2	5.7	19
188.0	0.3	0.8	0.8	–	45.8	36.5	500.8	157.2	5.7	26
202.0	0.3	0.4	0.4	–	45.8	36.4	504.5	157.2	5.7	Dec. 3
229.6	0.3	– 0.0	– 0.0	–	45.8	36.5	504.5	157.2	5.7	10
277.4	0.0	– 0.0	– 0.0	–	45.8	36.7	504.5	157.2	5.7	17
322.3	0.0	– 0.0	– 0.0	–	45.8	37.0	504.5	157.2	5.7	24
404.3	0.0	–	–	–	46.5	36.4	509.8	170.7	5.7	31
299.5	0.0	0.5	0.5	–	46.5	37.3	509.8	170.7	5.7	2022 Jan. 7

euro banknote issue". The remaining 92% of the value of the euro banknotes in circulation is allocated, likewise on an monthly basis, to the NCBs, with each NCB showing in its balance sheet the share of the euro banknotes issued corresponding to its paid-up share in the ECB's capital. The difference between the value of the euro banknotes allocated to the NCB according to the aforementioned accounting procedure and the value of euro banknotes put into circulation is also disclosed as an "Intra-Eurosystem claim/liability related to banknote issue". **2** For the Deutsche Bundesbank: including DEM banknotes still in circulation. **3** Source: ECB.

IV. Banks

1. Assets and liabilities of monetary financial institutions (excluding the Deutsche Bundesbank) in Germany * Assets

€ billion

Period	Balance sheet total [1]	Cash in hand	Lending to banks (MFIs) in the euro area							Lending to non-banks (non-MFIs) in the			
				to banks in the home country			to banks in other Member States				to non-banks in the home country		
												Enterprises and households	
			Total	Total	Loans	Securities issued by banks	Total	Loans	Securities issued by banks	Total	Total	Total	Loans
	End of year or month												
2011	8,393.3	16.4	2,394.4	1,844.5	1,362.2	482.2	550.0	362.3	187.7	3,673.5	3,270.5	2,709.4	2,415.1
2012	8,226.6	19.2	2,309.0	1,813.2	1,363.8	449.4	495.9	322.2	173.7	3,688.6	3,289.4	2,695.5	2,435.7
2013	7,528.9	18.7	2,145.0	1,654.8	1,239.1	415.7	490.2	324.6	165.6	3,594.3	3,202.1	2,616.3	2,354.0
2014	7,802.3	19.2	2,022.8	1,530.5	1,147.2	383.3	492.3	333.9	158.4	3,654.5	3,239.4	2,661.2	2,384.8
2015	7,665.2	19.5	2,013.6	1,523.8	1,218.0	305.8	489.8	344.9	144.9	3,719.9	3,302.5	2,727.4	2,440.0
2016	7,792.6	26.0	2,101.4	1,670.9	1,384.2	286.7	430.5	295.0	135.5	3,762.9	3,344.5	2,805.6	2,512.0
2017	7,710.8	32.1	2,216.3	1,821.1	1,556.3	264.8	395.2	270.1	125.2	3,801.7	3,400.7	2,918.8	2,610.1
2018	7,776.0	40.6	2,188.0	1,768.3	1,500.7	267.5	419.7	284.8	134.9	3,864.0	3,458.2	3,024.3	2,727.0
2019	8,311.0	43.4	2,230.1	1,759.8	1,493.5	266.3	470.4	327.6	142.8	4,020.1	3,584.9	3,168.7	2,864.9
2020	8,943.3	47.5	2,622.7	2,177.9	1,913.5	264.4	444.8	307.1	137.7	4,179.6	3,709.8	3,297.0	2,993.1
2020 Feb.	8,666.7	40.3	2,308.1	1,815.4	1,545.5	269.9	492.7	348.9	143.8	4,055.3	3,606.4	3,190.1	2,885.8
Mar.	8,912.6	48.1	2,421.0	1,920.7	1,651.9	268.8	500.4	357.5	142.8	4,096.9	3,641.9	3,215.5	2,915.9
Apr.	9,014.6	48.6	2,442.9	1,943.2	1,674.0	269.2	499.7	355.0	144.8	4,115.5	3,656.4	3,225.2	2,926.3
May	8,915.3	48.1	2,395.2	1,896.4	1,631.8	264.6	498.8	355.2	143.6	4,149.8	3,682.9	3,247.5	2,946.1
June	9,026.9	46.0	2,542.6	2,056.2	1,788.0	268.2	486.4	343.6	142.8	4,153.0	3,683.1	3,249.8	2,949.1
July	9,069.0	45.5	2,574.4	2,099.6	1,830.7	268.9	474.8	333.3	141.5	4,153.7	3,688.0	3,258.4	2,958.3
Aug.	8,985.5	46.0	2,595.4	2,127.5	1,858.5	269.0	467.9	328.0	139.9	4,148.3	3,691.9	3,266.7	2,966.1
Sep.	9,097.4	46.1	2,657.2	2,196.9	1,926.4	270.6	460.3	320.7	139.5	4,153.9	3,696.5	3,269.8	2,968.7
Oct.	9,124.3	46.3	2,686.7	2,226.8	1,957.0	269.8	459.9	320.9	139.0	4,181.8	3,713.6	3,283.1	2,980.6
Nov.	9,096.0	45.7	2,684.1	2,232.1	1,965.3	266.9	452.0	313.9	138.1	4,198.6	3,723.7	3,293.3	2,991.0
Dec.	8,943.3	47.5	2,622.7	2,177.9	1,913.5	264.4	444.8	307.1	137.7	4,179.6	3,709.8	3,297.0	2,993.1
2021 Jan.	9,150.4	44.9	2,793.5	2,309.4	2,042.2	267.2	484.1	348.8	135.3	4,195.0	3,716.6	3,302.6	2,997.8
Feb.	9,148.1	45.5	2,824.0	2,328.8	2,060.6	268.2	495.2	361.1	134.1	4,210.4	3,731.9	3,318.5	3,011.4
Mar.	9,261.9	45.7	2,904.5	2,419.8	2,145.0	274.8	484.8	351.2	133.6	4,245.8	3,762.0	3,347.6	3,038.5
Apr.	9,269.2	44.9	2,935.1	2,441.4	2,168.7	272.8	493.7	360.0	133.7	4,236.4	3,756.9	3,347.0	3,036.8
May	9,277.1	45.7	2,974.7	2,485.3	2,212.9	272.4	489.4	355.6	133.9	4,246.1	3,772.8	3,363.3	3,049.8
June	9,293.7	46.5	2,959.9	2,469.9	2,197.4	272.5	490.0	356.7	133.3	4,253.7	3,772.0	3,370.7	3,056.9
July	9,321.9	46.8	2,943.6	2,448.2	2,178.3	269.9	495.3	361.1	134.2	4,270.2	3,788.1	3,386.0	3,071.8
Aug.	9,319.3	46.9	2,950.1	2,457.4	2,188.5	268.8	492.8	359.5	133.3	4,283.3	3,799.4	3,400.4	3,085.0
Sep.	9,325.3	47.4	2,952.3	2,472.9	2,203.6	269.3	479.4	344.9	134.5	4,303.0	3,812.2	3,409.8	3,093.8
Oct.	9,395.0	47.8	2,979.8	2,490.1	2,221.1	269.0	489.7	356.2	133.5	4,322.0	3,832.5	3,437.3	3,117.5
Nov.	9,495.5	48.1	3,008.1	2,519.6	2,253.4	266.2	488.5	355.4	133.1	4,351.9	3,856.7	3,460.1	3,138.9
	Changes [3]												
2012	− 129.2	2.9	− 81.9	− 28.4	3.0	− 31.4	− 53.5	− 39.7	− 13.8	27.5	27.7	17.0	28.8
2013	− 703.6	− 0.5	− 257.1	− 249.2	− 216.5	− 32.7	− 7.9	1.6	− 9.5	13.6	16.6	23.6	21.6
2014	206.8	0.4	− 126.2	− 128.6	− 95.3	− 33.4	2.4	7.2	− 4.8	55.1	40.0	52.3	36.8
2015	− 191.4	0.3	− 18.2	− 12.1	66.1	− 78.2	− 6.1	6.6	− 12.8	64.8	64.1	68.1	56.6
2016	184.3	6.5	120.3	178.4	195.3	− 16.8	− 58.1	− 49.2	− 8.8	57.5	53.4	88.8	81.0
2017	8.0	6.1	135.9	165.0	182.6	− 17.6	− 29.1	− 19.6	− 9.5	51.3	63.5	114.8	101.1
2018	101.8	8.5	− 29.2	− 49.7	− 53.4	3.7	20.6	13.0	7.6	78.7	71.9	118.1	127.8
2019	483.4	2.8	20.7	− 3.8	− 2.3	− 1.5	24.5	16.9	7.5	161.8	130.5	148.2	140.9
2020	769.5	4.1	505.4	524.2	512.6	11.6	− 18.8	− 16.2	− 2.6	161.0	130.0	132.3	132.2
2020 Mar.	251.0	7.9	113.4	105.3	106.1	− 0.9	8.2	8.8	− 0.6	44.3	36.8	26.5	31.0
Apr.	96.1	0.5	20.8	21.8	21.5	0.3	− 1.1	− 3.0	1.9	18.2	14.2	9.8	10.5
May	− 40.6	− 0.6	22.6	22.4	19.3	3.1	0.2	1.3	− 1.1	27.3	24.9	20.5	18.0
June	118.6	− 2.1	149.4	161.5	157.8	3.7	− 12.1	− 11.2	− 0.9	5.0	1.7	3.6	4.3
July	67.5	− 0.5	36.5	45.1	44.3	0.8	− 8.6	− 7.5	− 1.1	3.1	6.6	10.2	10.8
Aug.	− 79.5	0.5	21.7	28.2	28.0	0.1	− 6.4	− 4.9	− 1.5	− 4.9	4.3	8.7	8.1
Sep.	104.9	0.1	60.5	69.0	67.5	1.5	− 8.5	− 8.0	− 0.4	5.2	4.5	3.0	2.6
Oct.	25.2	0.2	29.1	29.7	30.5	− 0.8	− 0.6	0.1	− 0.7	27.6	17.3	12.9	11.3
Nov.	12.0	− 0.6	29.0	35.8	37.2	− 1.4	− 6.8	− 6.1	− 0.8	18.6	11.3	11.2	11.5
Dec.	− 141.5	1.8	− 59.5	− 53.6	− 51.2	− 2.4	− 5.9	− 5.8	− 0.2	− 18.3	− 13.3	4.2	2.7
2021 Jan.	201.4	− 2.6	169.3	131.0	128.3	2.8	38.2	40.5	− 2.3	16.8	7.7	6.6	5.1
Feb.	− 2.3	0.7	30.3	19.2	18.2	1.1	11.0	12.2	− 1.2	15.9	15.5	15.7	13.4
Mar.	100.0	0.2	78.0	90.0	83.7	6.3	− 12.0	− 11.5	− 0.5	34.3	29.7	28.8	27.0
Apr.	21.2	− 0.8	33.6	23.0	24.6	− 1.6	10.6	10.5	0.2	− 8.8	− 5.2	− 0.1	− 1.1
May	10.7	0.8	38.9	44.1	44.4	− 0.3	− 5.2	− 5.5	0.3	10.4	16.0	15.7	13.0
June	5.3	0.9	− 17.1	− 16.3	− 15.8	− 0.5	− 0.8	− 0.2	− 0.6	7.3	− 0.5	7.6	6.7
July	26.3	0.2	− 15.0	− 19.5	− 17.5	− 2.0	4.5	4.4	0.1	17.3	16.4	15.6	15.3
Aug.	− 3.9	0.2	6.7	9.3	10.3	− 1.0	− 2.6	− 1.7	− 0.9	13.2	11.2	14.7	13.4
Sep.	3.0	0.4	0.1	14.4	13.9	0.5	− 14.4	− 15.6	1.3	19.8	13.0	9.4	8.8
Oct.	70.4	0.5	27.7	17.3	17.6	− 0.3	10.5	11.4	− 1.0	19.2	20.6	28.0	24.1
Nov.	102.4	0.3	28.6	29.8	32.7	− 2.9	− 1.2	− 0.8	− 0.4	31.7	26.0	22.9	21.4

***** This table serves to supplement the "Overall monetary survey" in Section II. Unlike the other tables in Section IV, this table includes - in addition to the figures reported by banks (including building and loan associations) - data from money market funds. **1** See footnote 1 in Table IV.2. **2** Including debt securities arising from the exchange

IV. Banks

euro area														
				to non-banks in other Member States						Claims on non-euro area residents			
	General government				Enterprises and households		General government						
Securities	Total	Loans	Securities [2]	Total	Total	of which: Loans	Total	Loans	Securities	Total	of which: Loans	Other assets [1]	Period
End of year or month													
294.3	561.1	359.8	201.2	403.1	276.9	161.2	126.2	32.6	93.6	995.1	770.9	1,313.8	2011
259.8	594.0	350.3	243.7	399.2	275.1	158.1	124.1	30.4	93.7	970.3	745.0	1,239.4	2012
262.3	585.8	339.2	246.6	392.3	267.6	144.6	124.6	27.8	96.9	921.2	690.5	849.7	2013
276.4	578.2	327.9	250.4	415.0	270.0	142.7	145.0	31.9	113.2	1,050.1	805.0	1,055.8	2014
287.4	575.1	324.5	250.6	417.5	276.0	146.4	141.5	29.4	112.1	1,006.5	746.3	905.6	2015
293.6	538.9	312.2	226.7	418.4	281.7	159.5	136.7	28.5	108.2	1,058.2	802.3	844.1	2016
308.7	481.9	284.3	197.6	401.0	271.8	158.3	129.1	29.8	99.3	991.9	745.3	668.9	2017
297.2	433.9	263.4	170.5	405.8	286.7	176.5	119.2	28.6	90.6	1,033.2	778.5	650.2	2018
303.8	416.2	254.7	161.6	435.2	312.6	199.0	122.6	29.4	93.2	1,035.8	777.5	981.5	2019
303.9	412.8	252.3	160.5	469.8	327.5	222.2	142.3	29.7	112.7	1,003.2	751.2	1,090.3	2020
304.3	416.3	256.5	159.8	448.9	322.8	206.6	126.2	29.9	96.3	1,088.6	829.3	1,174.5	2020 Feb.
299.6	426.4	258.5	167.9	455.0	325.2	212.8	129.8	29.5	100.3	1,104.4	838.8	1,242.1	Mar.
298.8	431.2	259.2	172.0	459.1	329.0	217.4	130.2	31.1	99.1	1,119.2	852.3	1,288.4	Apr.
301.4	435.4	258.3	177.1	466.9	334.5	220.6	132.3	31.0	101.3	1,102.1	840.8	1,220.2	May
300.7	433.3	257.8	175.5	469.9	331.1	215.4	138.8	29.2	109.6	1,075.8	816.4	1,209.5	June
300.1	429.6	259.1	170.5	465.7	313.2	217.1	152.5	29.9	122.6	1,047.3	792.5	1,248.1	July
300.7	425.1	253.7	171.4	456.5	311.1	214.5	145.4	29.2	116.1	1,037.6	784.0	1,158.2	Aug.
301.1	426.7	256.0	170.8	457.4	311.0	215.2	146.4	29.3	117.0	1,063.9	808.9	1,176.3	Sep.
302.5	430.5	257.3	173.2	468.2	318.6	219.6	149.5	30.2	119.3	1,049.9	793.4	1,159.6	Oct.
302.2	430.5	256.7	173.8	474.8	325.6	222.5	149.2	29.1	120.1	1,048.0	792.3	1,119.7	Nov.
303.9	412.8	252.3	160.5	469.8	327.5	222.2	142.3	29.7	112.7	1,003.2	751.2	1,090.3	Dec.
304.9	414.0	253.3	160.7	478.4	330.8	224.5	147.6	28.7	118.9	1,087.5	834.6	1,029.5	2021 Jan.
307.1	413.4	250.6	162.9	478.5	334.5	227.0	144.0	28.8	115.2	1,093.8	843.9	974.4	Feb.
309.1	414.4	249.3	165.1	483.8	339.4	232.3	144.4	28.9	115.5	1,105.7	855.5	960.1	Mar.
310.2	409.9	251.0	158.9	479.5	339.8	232.3	139.7	30.3	109.4	1,122.5	876.2	930.3	Apr.
313.5	409.5	250.6	158.9	473.2	339.1	231.9	134.1	28.4	105.7	1,108.3	862.4	902.3	May
313.8	401.4	249.1	152.3	481.7	339.4	231.8	142.3	28.8	113.5	1,111.0	864.8	922.5	June
314.2	402.2	251.3	150.8	482.0	344.2	236.6	137.8	28.6	109.2	1,097.1	849.1	964.3	July
315.4	398.9	248.0	150.9	484.0	346.1	238.8	137.9	28.3	109.6	1,084.8	839.7	954.2	Aug.
316.0	402.4	248.3	154.1	490.7	352.5	241.7	138.2	27.9	110.3	1,087.9	840.8	934.8	Sep.
319.9	395.1	249.7	145.4	489.5	356.0	244.3	133.4	30.3	103.2	1,134.6	889.6	910.9	Oct.
321.2	396.6	247.8	148.8	495.2	361.1	249.6	134.1	28.5	105.6	1,137.3	892.4	950.2	Nov.
Changes [3]													
− 11.8	10.7	− 10.5	21.2	− 0.2	− 0.7	− 1.5	0.5	− 2.2	2.7	− 15.5	− 17.7	− 62.2	2012
2.0	− 7.0	− 10.9	3.9	− 3.0	− 3.4	− 9.3	0.5	− 2.6	3.1	− 38.8	− 47.2	− 420.8	2013
15.5	− 12.3	− 15.1	2.9	15.1	0.4	− 4.0	14.6	0.9	13.8	83.6	72.0	194.0	2014
11.5	− 3.9	− 4.2	0.3	0.7	4.4	1.8	− 3.7	− 1.0	− 2.8	− 88.3	− 101.0	− 150.1	2015
7.8	− 35.4	− 12.1	− 23.3	4.0	8.2	14.6	− 4.2	− 0.9	− 3.3	51.4	55.0	− 51.4	2016
13.7	− 51.3	− 22.8	− 28.5	− 12.2	− 3.4	4.0	− 8.7	0.1	− 8.9	− 12.3	− 6.7	− 173.1	2017
− 9.8	− 46.2	− 19.1	− 27.0	6.8	18.2	18.6	− 11.4	− 1.5	− 9.9	29.0	18.9	14.8	2018
7.3	− 17.7	− 8.6	− 9.1	31.3	29.5	26.9	1.7	0.0	1.7	− 32.1	− 33.3	330.3	2019
0.2	− 2.4	− 1.7	− 0.7	31.0	30.6	20.9	0.3	− 0.4	0.7	− 9.7	− 8.2	108.8	2020
− 4.5	10.2	2.0	8.3	7.5	3.3	6.5	4.2	− 0.4	4.6	17.8	11.2	67.6	2020 Mar.
− 0.7	4.5	0.6	3.9	4.0	3.7	4.3	0.3	1.6	− 1.3	10.4	9.3	46.3	Apr.
2.5	4.4	− 0.9	5.3	2.5	0.8	− 1.2	1.6	− 0.6	2.2	− 23.0	− 18.2	− 67.0	May
− 0.7	− 1.9	− 0.3	− 1.6	3.3	− 3.2	− 4.9	6.4	− 1.8	8.2	− 22.9	− 21.2	− 10.8	June
− 0.6	− 3.6	1.3	− 4.9	− 3.5	1.6	2.7	− 5.1	0.6	− 5.7	− 10.3	− 7.1	38.7	July
0.6	− 4.4	− 5.4	0.9	− 9.2	− 2.3	− 2.5	− 6.9	− 0.7	− 6.2	− 7.0	− 6.0	− 89.8	Aug.
0.4	1.5	2.2	− 0.7	0.7	− 0.1	0.7	0.9	0.1	0.7	21.1	20.0	18.0	Sep.
1.6	4.4	2.0	2.5	10.4	7.3	4.2	3.0	0.9	2.1	− 15.3	− 16.7	− 16.4	Oct.
− 0.3	0.2	− 0.5	0.7	7.3	7.6	3.6	− 0.3	− 1.1	0.8	6.4	6.6	− 41.4	Nov.
1.5	− 17.5	− 4.4	− 13.2	− 4.9	1.9	0.3	− 6.9	0.6	− 7.4	− 36.3	− 34.4	− 29.3	Dec.
1.5	1.1	0.9	0.2	9.1	3.8	2.9	5.3	− 0.9	6.2	80.2	79.8	− 62.3	2021 Jan.
2.3	− 0.2	− 2.4	2.3	0.3	3.7	2.4	− 3.4	0.1	− 3.4	6.3	8.9	− 55.4	Feb.
1.9	0.9	− 1.3	2.2	4.6	4.2	4.9	0.4	0.1	0.3	2.8	3.3	− 15.3	Mar.
1.0	− 5.0	1.7	− 6.7	− 3.6	0.9	0.7	− 4.5	1.5	− 6.0	26.0	29.0	− 28.8	Apr.
2.7	0.4	− 0.3	0.7	− 5.6	− 0.1	0.3	− 5.5	− 1.9	− 3.6	− 11.4	− 11.4	− 28.0	May
0.8	− 8.1	− 1.4	− 6.7	7.8	− 0.4	− 0.6	8.2	0.4	7.7	− 5.7	− 5.3	19.9	June
0.4	0.7	2.3	− 1.5	1.0	5.6	4.8	− 4.7	− 0.2	− 4.5	− 15.0	− 16.5	38.7	July
1.2	− 3.4	− 3.5	0.1	1.9	1.8	2.2	0.1	− 0.3	0.4	− 13.1	− 10.0	− 10.8	Aug.
0.6	3.6	0.3	3.2	6.8	6.3	2.9	0.5	− 0.4	0.9	0.1	− 1.5	− 17.4	Sep.
3.9	− 7.4	1.2	− 8.7	− 1.4	3.5	2.6	− 4.8	2.3	− 7.2	47.6	49.5	− 24.6	Oct.
1.4	3.1	− 0.9	4.0	5.7	5.2	5.2	0.5	− 1.7	2.2	3.2	3.4	38.6	Nov.

of equalisation claims. **3** Statistical breaks have been eliminated from the flow figures (see also footnote * in Table II.1).

IV. Banks

1. Assets and liabilities of monetary financial institutions (excluding the Deutsche Bundesbank) in Germany * Liabilities

€ billion

Period	Balance sheet total [1]	Deposits of banks (MFIs) in the euro area			Deposits of non-banks (non-MFIs) in the euro area								
						Deposits of non-banks in the home country						Deposits of non-banks	
			of banks					With agreed maturities		At agreed notice			
		Total	in the home country	in other Member States	Total	Total	Overnight	Total	of which: up to 2 years	Total	of which: up to 3 months	Total	Overnight
	End of year or month												
2011	8,393.3	1,444.8	1,210.3	234.5	3,033.4	2,915.1	1,143.3	1,155.8	362.6	616.1	515.3	78.8	25.9
2012	8,226.6	1,371.0	1,135.9	235.1	3,091.4	2,985.2	1,294.9	1,072.8	320.0	617.6	528.4	77.3	31.2
2013	7,528.9	1,345.4	1,140.3	205.1	3,130.5	3,031.5	1,405.3	1,016.2	293.7	610.1	532.4	81.3	33.8
2014	7,802.3	1,324.0	1,112.3	211.7	3,197.7	3,107.4	1,514.3	985.4	298.1	607.7	531.3	79.7	34.4
2015	7,665.2	1,267.8	1,065.9	201.9	3,307.1	3,215.1	1,670.2	948.4	291.5	596.4	534.5	80.8	35.3
2016	7,792.6	1,205.2	1,033.2	172.0	3,411.3	3,318.5	1,794.8	935.3	291.2	588.5	537.0	84.2	37.2
2017	7,710.8	1,233.6	1,048.6	184.9	3,529.1	3,411.1	1,936.6	891.7	274.2	582.8	541.0	108.6	42.5
2018	7,776.0	1,213.8	1,021.8	192.0	3,642.8	3,527.0	2,075.5	872.9	267.2	578.6	541.1	104.5	45.0
2019	8,311.0	1,242.8	1,010.4	232.4	3,778.1	3,649.8	2,230.9	843.7	261.7	575.1	540.5	116.3	54.6
2020	8,943.3	1,493.2	1,237.0	256.3	4,021.6	3,836.7	2,508.4	767.8	227.1	560.5	533.2	135.1	57.0
2020 Feb.	8,666.7	1,313.5	1,047.8	265.7	3,794.5	3,664.6	2,249.1	847.1	270.3	568.4	535.8	117.0	55.2
Mar.	8,912.6	1,418.4	1,135.8	282.6	3,853.2	3,705.0	2,299.1	841.5	268.6	564.4	532.5	135.5	72.3
Apr.	9,014.6	1,426.3	1,156.6	269.6	3,872.7	3,729.4	2,339.0	826.7	259.6	563.8	532.6	130.3	65.2
May	8,915.3	1,386.1	1,112.0	274.0	3,913.5	3,764.4	2,370.9	829.9	266.6	563.6	532.9	136.6	70.6
June	9,026.9	1,503.5	1,230.4	273.1	3,906.1	3,754.5	2,379.1	812.8	256.1	562.5	532.8	139.2	71.1
July	9,069.0	1,488.7	1,209.5	279.2	3,937.1	3,783.3	2,408.1	814.3	263.0	560.9	531.7	132.9	65.5
Aug.	8,985.5	1,489.8	1,213.2	276.6	3,951.0	3,790.7	2,421.8	808.3	258.8	560.6	531.8	129.7	63.6
Sep.	9,097.4	1,523.9	1,252.4	271.5	3,975.9	3,795.1	2,436.7	798.3	251.4	560.1	531.7	140.6	72.8
Oct.	9,124.3	1,536.3	1,264.9	271.4	4,015.2	3,827.0	2,473.1	794.2	249.1	559.7	531.7	140.8	69.6
Nov.	9,096.0	1,515.4	1,245.5	269.9	4,035.0	3,846.2	2,508.7	778.0	235.3	559.6	532.0	140.2	69.0
Dec.	8,943.3	1,493.2	1,237.0	256.3	4,021.6	3,836.7	2,508.4	767.8	227.1	560.5	533.2	135.1	57.0
2021 Jan.	9,150.4	1,560.0	1,262.3	297.7	4,044.0	3,855.8	2,536.8	757.4	219.4	561.6	534.8	138.4	65.8
Feb.	9,148.1	1,584.4	1,261.7	322.7	4,053.2	3,865.2	2,552.4	750.1	214.1	562.6	536.1	137.7	68.2
Mar.	9,261.9	1,634.1	1,336.6	297.6	4,068.3	3,876.2	2,569.2	744.7	212.3	562.3	536.2	142.2	71.0
Apr.	9,269.2	1,659.9	1,344.1	315.8	4,079.3	3,886.3	2,588.3	735.3	205.8	562.7	536.9	143.0	70.2
May	9,277.1	1,661.1	1,353.0	308.1	4,103.8	3,909.2	2,614.0	732.0	205.0	563.2	537.5	146.4	70.4
June	9,293.7	1,670.8	1,357.4	313.4	4,088.4	3,890.3	2,605.4	722.3	198.1	562.6	537.1	151.3	76.7
July	9,321.9	1,682.5	1,362.0	320.4	4,110.8	3,918.9	2,638.6	718.3	196.7	562.0	536.8	146.4	74.0
Aug.	9,319.3	1,686.5	1,365.8	320.7	4,119.2	3,925.6	2,648.6	715.5	194.1	561.5	536.6	147.8	74.7
Sep.	9,325.3	1,667.9	1,354.2	313.6	4,108.9	3,913.6	2,640.2	712.7	194.3	560.7	535.9	148.8	77.1
Oct.	9,395.0	1,690.9	1,364.7	326.2	4,140.0	3,942.6	2,657.0	725.5	206.4	560.1	535.6	151.4	78.1
Nov.	9,495.5	1,718.6	1,374.8	343.8	4,154.1	3,956.2	2,678.9	717.5	200.0	559.8	535.5	151.0	82.5
	Changes [4]												
2012	– 129.2	– 68.7	– 70.0	1.3	57.8	67.1	156.1	– 90.4	– 50.2	1.5	14.1	– 1.4	5.4
2013	– 703.6	– 106.2	– 73.9	– 32.3	39.1	47.8	111.5	– 56.3	– 26.6	– 7.3	4.0	2.6	3.3
2014	206.8	– 28.4	– 32.2	3.9	62.7	71.6	106.0	– 32.1	3.1	– 2.4	– 2.4	– 2.5	– 0.0
2015	– 191.4	– 62.1	– 50.3	– 11.9	104.1	104.8	153.2	– 37.0	– 10.1	– 11.3	4.2	– 0.4	– 0.3
2016	184.3	– 31.6	– 2.2	– 29.4	105.7	105.2	124.3	– 11.1	1.4	– 8.0	2.4	2.7	1.9
2017	8.0	30.6	14.8	15.8	124.2	107.7	145.8	– 32.5	– 15.3	– 5.6	1.5	16.4	5.8
2018	101.8	– 20.1	– 25.7	5.6	112.4	114.7	137.7	– 18.8	– 6.5	– 4.3	1.2	– 4.3	2.3
2019	483.4	12.6	– 10.0	22.6	132.1	120.0	154.1	– 30.6	– 6.6	– 3.4	– 0.6	10.6	8.7
2020	769.5	340.0	317.0	23.0	244.9	188.4	277.6	– 74.7	– 34.9	– 14.5	– 7.2	18.7	1.8
2020 Mar.	251.0	104.6	87.7	16.9	58.9	40.4	50.1	– 5.6	– 1.7	– 4.0	– 3.4	18.5	17.1
Apr.	96.1	7.0	20.3	– 13.3	18.8	24.0	39.6	– 15.0	– 9.2	– 0.7	0.1	– 5.3	– 7.1
May	– 40.6	22.0	16.8	5.2	34.0	33.3	29.9	3.6	7.3	– 0.2	0.3	1.2	0.1
June	118.6	118.2	118.9	– 0.7	– 7.0	– 9.6	8.3	– 16.8	– 10.5	– 1.1	– 0.1	2.6	0.6
July	67.5	– 11.0	– 19.0	8.1	34.1	31.5	31.0	2.1	7.4	– 1.6	– 1.1	– 5.7	– 5.4
Aug.	– 79.5	1.6	4.0	– 2.4	14.4	7.7	13.8	– 5.9	– 4.1	– 0.2	0.2	– 3.2	– 1.9
Sep.	104.9	33.1	38.7	– 5.7	24.1	3.7	14.4	– 10.2	– 7.6	– 0.5	– 0.1	10.7	9.1
Oct.	25.2	12.3	12.4	– 0.1	39.1	32.1	36.4	– 3.9	– 3.3	– 0.4	– 0.0	0.1	– 3.3
Nov.	12.0	8.2	8.4	– 0.1	25.6	20.2	36.4	– 16.0	– 13.6	– 0.1	0.3	4.1	3.9
Dec.	– 141.5	– 25.2	– 7.9	– 17.3	– 12.3	– 8.7	0.3	– 10.0	– 8.0	1.0	1.3	– 4.8	– 11.8
2021 Jan.	201.4	65.4	25.0	40.4	21.0	18.6	28.1	– 10.6	– 7.8	1.1	1.6	2.6	9.7
Feb.	– 2.3	24.4	– 0.7	25.1	9.0	9.2	15.5	– 7.3	– 5.3	1.0	1.3	– 0.7	2.4
Mar.	100.0	47.8	73.8	– 26.0	13.6	9.9	15.8	– 5.6	– 1.9	– 0.3	0.1	4.0	2.5
Apr.	21.2	27.6	8.3	19.3	12.5	11.2	20.1	– 9.4	– 6.5	0.4	0.7	1.2	– 0.6
May	10.7	0.6	9.1	– 8.5	24.9	23.2	26.0	– 3.2	– 0.7	0.5	0.6	3.5	0.3
June	5.3	8.2	3.7	4.4	– 16.6	– 19.8	– 9.4	– 9.8	– 7.1	– 0.6	– 0.4	4.5	6.1
July	26.3	14.4	7.4	7.0	22.3	28.6	33.2	– 4.1	– 1.4	– 0.6	– 0.3	– 4.9	– 3.1
Aug.	– 3.9	3.9	3.7	0.2	7.8	6.5	9.9	– 2.8	– 2.6	– 0.5	– 0.3	0.9	0.2
Sep.	3.0	– 19.5	– 11.7	– 7.8	– 7.3	– 8.9	– 6.5	– 1.6	0.4	– 0.8	– 0.6	0.7	2.7
Oct.	70.4	24.1	11.2	12.9	31.1	29.1	16.8	12.9	12.1	– 0.6	– 0.4	2.5	1.1
Nov.	102.4	27.8	10.2	17.6	14.3	13.7	21.8	– 7.8	– 6.0	– 0.3	– 0.1	– 0.3	4.4

* This table serves to supplement the "Overall monetary survey" in Section II. Unlike the other tables in Section IV, this table includes - in addition to the figures reported by banks (including building and loan associations) - data from money market funds. **1** See footnote 1 in Table IV.2. **2** Excluding deposits of central governments.

IV. Banks

in other Member States [2]				Deposits of central governments		Liabilities arising from repos with non-banks in the euro area	Money market fund shares issued [3]	Debt securities issued [3]		Liabilities to non-euro area residents	Capital and reserves	Other Liabilities [1]	Period
With agreed maturities		At agreed notice											
Total	of which: up to 2 years	Total	of which: up to 3 months	Total	of which: domestic central governments			Total	of which: with maturities of up to 2 years [3]				
End of year or month													
49.6	18.4	3.3	2.5	39.5	37.9	97.1	6.2	1,345.7	75.7	561.5	468.1	1,436.6	2011
42.3	14.7	3.8	2.8	28.9	25.9	80.4	7.3	1,233.1	56.9	611.4	487.3	1,344.7	2012
44.0	16.9	3.5	2.7	17.6	16.0	6.7	4.1	1,115.2	39.0	479.5	503.0	944.5	2013
42.0	15.9	3.3	2.7	10.6	10.5	3.4	3.5	1,077.6	39.6	535.3	535.4	1,125.6	2014
42.2	16.0	3.3	2.8	11.3	9.6	2.5	3.5	1,017.7	48.3	526.2	569.3	971.1	2015
43.9	15.8	3.1	2.6	8.6	7.9	2.2	2.4	1,030.3	47.2	643.4	591.5	906.3	2016
63.2	19.7	2.9	2.6	9.4	8.7	3.3	2.1	994.5	37.8	603.4	686.0	658.8	2017
56.7	15.8	2.8	2.5	11.3	10.5	0.8	2.4	1,034.0	31.9	575.9	695.6	610.7	2018
59.0	16.5	2.7	2.4	12.0	11.2	1.5	1.9	1,063.2	32.3	559.4	728.6	935.6	2019
75.6	30.6	2.6	2.3	49.8	48.6	9.4	2.5	1,056.9	21.2	617.6	710.8	1,031.3	2020
59.2	15.3	2.6	2.4	12.9	11.2	2.0	1.9	1,087.4	34.6	638.8	714.0	1,114.6	2020 Feb.
60.6	16.5	2.6	2.4	12.8	11.2	1.7	2.5	1,074.1	30.8	674.1	713.4	1,175.2	Mar.
62.4	17.6	2.6	2.4	13.0	11.1	3.4	2.4	1,078.1	29.6	704.0	693.5	1,234.2	Apr.
63.4	16.4	2.6	2.4	12.5	10.8	2.2	2.2	1,076.9	28.8	693.7	686.4	1,154.4	May
65.4	19.2	2.6	2.4	12.5	11.8	0.9	2.1	1,074.0	28.6	696.8	702.1	1,141.4	June
64.8	20.2	2.6	2.3	20.8	20.1	2.1	1.9	1,067.4	25.9	698.3	694.7	1,178.9	July
63.6	19.3	2.6	2.3	30.6	29.8	1.7	1.9	1,063.9	25.5	682.1	699.9	1,095.2	Aug.
65.2	21.8	2.6	2.3	40.2	39.0	1.2	2.6	1,077.3	25.6	687.1	720.4	1,108.9	Sep.
68.6	25.0	2.6	2.3	47.3	46.6	1.4	2.7	1,075.1	24.6	687.8	712.4	1,093.3	Oct.
68.7	24.3	2.6	2.3	48.5	47.6	9.1	2.5	1,070.0	23.3	696.7	713.1	1,054.3	Nov.
75.6	30.6	2.6	2.3	49.8	48.6	9.4	2.5	1,056.9	21.2	617.6	710.8	1,031.3	Dec.
70.0	23.7	2.6	2.3	49.7	48.3	6.3	2.5	1,058.8	19.7	790.8	708.3	979.7	2021 Jan.
67.0	20.5	2.5	2.3	50.3	48.2	4.5	2.5	1,068.3	19.6	803.5	702.4	929.4	Feb.
68.7	22.0	2.5	2.3	49.9	48.9	6.7	2.9	1,090.4	21.5	833.7	712.0	913.8	Mar.
70.3	23.2	2.5	2.3	50.0	48.6	5.1	2.9	1,091.8	21.0	839.1	705.9	885.3	Apr.
73.5	26.7	2.5	2.3	48.2	46.6	6.0	2.3	1,087.7	23.5	854.7	702.7	858.8	May
72.0	25.9	2.5	2.3	46.9	45.6	4.5	2.3	1,084.6	23.8	836.9	725.4	880.7	June
69.9	22.9	2.5	2.3	45.5	44.3	6.0	2.3	1,087.2	23.5	800.0	719.2	913.9	July
70.7	24.0	2.5	2.3	45.8	44.0	7.4	2.3	1,089.9	25.5	790.7	725.0	898.4	Aug.
69.2	22.4	2.5	2.2	46.6	45.2	7.3	2.2	1,100.5	25.1	840.1	735.9	862.6	Sep.
70.9	23.4	2.4	2.2	46.1	45.2	7.4	2.2	1,118.0	24.6	866.7	729.5	840.3	Oct.
66.0	17.3	2.4	2.2	46.9	45.8	4.2	2.1	1,123.0	25.1	883.2	737.5	872.8	Nov.
Changes [4]													
– 7.2	– 3.6	0.5	0.3	– 7.9	– 9.2	– 19.6	1.2	– 107.0	– 18.6	54.2	21.0	– 68.5	2012
– 0.5	2.2	– 0.3	– 0.1	– 11.3	– 10.0	4.1	– 3.2	– 104.9	– 17.6	– 134.1	18.9	– 417.1	2013
– 2.3	– 1.2	– 0.2	– 0.1	– 6.4	– 4.8	– 3.4	– 0.6	– 63.7	– 0.2	35.9	26.1	178.3	2014
– 0.1	0.0	0.0	0.1	– 0.4	– 1.9	– 1.0	– 0.0	– 86.8	7.7	– 30.3	28.0	– 143.2	2015
1.1	0.0	– 0.3	– 0.1	– 2.2	– 1.2	– 0.3	– 1.1	8.6	– 1.3	116.1	26.4	– 39.5	2016
10.8	4.2	– 0.1	– 0.0	– 0.0	– 0.0	1.1	– 0.3	– 3.3	– 8.5	– 16.1	34.1	– 162.3	2017
– 6.4	– 4.1	– 0.1	– 0.1	2.1	2.1	– 2.6	0.3	30.0	– 5.9	– 36.0	7.4	10.3	2018
2.0	0.6	– 0.1	– 0.1	1.4	1.4	5.6	– 0.5	22.3	0.1	– 47.9	30.0	329.1	2019
17.0	14.3	– 0.1	– 0.1	37.8	37.3	3.6	0.6	11.8	– 9.3	61.6	– 1.5	108.5	2020
1.4	1.2	– 0.0	– 0.0	– 0.0	– 0.0	– 0.3	0.6	– 11.9	– 3.8	36.2	– 0.3	63.2	2020 Mar.
1.8	1.1	– 0.0	– 0.0	0.1	– 0.1	1.7	– 0.1	1.6	– 1.3	27.6	– 20.7	60.3	Apr.
1.1	– 1.1	– 0.0	– 0.0	– 0.5	– 0.3	– 1.2	– 0.1	5.1	– 0.6	– 21.9	3.5	– 82.0	May
2.0	2.8	– 0.0	0.0	0.0	1.0	– 1.3	– 0.2	– 1.3	– 0.1	4.6	16.4	– 10.8	June
– 0.3	1.2	– 0.0	– 0.0	8.3	8.3	1.3	– 0.2	3.3	– 1.2	10.9	– 4.3	33.3	July
– 1.3	– 0.8	– 0.0	– 0.0	9.8	9.8	– 0.5	0.0	– 2.2	– 0.4	– 14.9	5.7	– 83.7	Aug.
1.6	2.4	– 0.0	– 0.0	9.6	9.2	– 0.5	0.7	10.5	0.0	2.6	19.6	14.9	Sep.
3.4	3.2	– 0.0	0.0	7.0	7.5	0.3	0.1	– 2.9	– 1.0	– 0.1	– 8.2	– 15.5	Oct.
0.2	– 0.6	– 0.0	– 0.0	1.2	1.0	3.3	– 0.2	– 0.9	– 1.2	12.6	3.3	– 39.9	Nov.
7.0	6.3	0.0	0.0	1.3	1.0	0.3	– 0.0	– 9.0	– 1.9	– 71.4	– 0.7	– 23.2	Dec.
– 7.1	– 6.9	0.0	0.0	– 0.1	– 0.2	– 3.0	– 0.0	– 0.5	– 1.5	171.3	– 3.7	– 49.0	2021 Jan.
– 3.1	– 3.2	– 0.0	– 0.0	0.6	– 0.2	– 1.8	– 0.0	8.9	– 0.1	12.2	– 6.2	– 48.9	Feb.
1.5	1.3	– 0.0	0.0	– 0.4	0.8	2.1	0.5	15.7	1.7	24.0	7.1	– 10.8	Mar.
1.8	1.3	– 0.0	– 0.0	0.1	– 0.4	– 2.2	– 0.1	7.3	– 0.4	11.1	– 3.7	– 31.3	Apr.
3.2	3.5	– 0.0	0.0	– 1.8	– 1.9	0.9	– 0.1	– 2.7	2.5	17.0	– 2.8	– 27.1	May
– 1.6	– 0.9	– 0.0	– 0.0	– 1.3	– 1.0	– 1.5	0.1	– 7.7	0.2	– 22.7	20.9	24.6	June
– 1.8	– 2.7	– 0.0	– 0.0	– 1.4	– 1.3	1.5	– 0.1	2.3	– 0.2	– 37.2	– 5.4	28.5	July
0.7	1.0	– 0.0	– 0.0	0.3	– 0.2	1.4	– 0.0	2.2	2.0	– 9.9	5.6	– 14.9	Aug.
– 1.9	– 1.6	– 0.0	– 0.0	0.8	1.2	– 0.1	– 0.0	7.0	– 0.5	45.5	10.0	– 32.4	Sep.
1.5	0.9	– 0.0	– 0.0	– 0.5	0.0	0.1	– 0.1	17.3	– 0.5	27.1	– 6.4	– 22.8	Oct.
– 4.7	– 6.1	– 0.0	– 0.0	0.9	0.6	– 3.2	– 0.1	6.5	2.0	16.8	6.8	33.4	Nov.

3 In Germany, debt securities with maturities of up to one year are classed as money market paper; up to the January 2002 Monthly Report they were published together with money market fund shares. **4** Statistical breaks have been eliminated from the flow figures (see also footnote * in Table II.1).

IV. Banks

2. Principal assets and liabilities of banks (MFIs) in Germany, by category of banks *

€ billion

End of month	Number of reporting institutions	Balance sheet total [1]	Cash in hand and credit balances with central banks	Lending to banks (MFIs)			Lending to non-banks (non-MFIs)					Participating interests	Other assets [1]
				Total	of which:		Total	of which:					
					Balances and loans	Securities issued by banks		Loans		Bills	Securities issued by non-banks		
								for up to and including 1 year	for more than 1 year				
All categories of banks													
2021 June	1,487	9,355.0	1,089.8	2,569.0	2,084.1	481.5	4,564.4	391.3	3,465.9	0.3	690.6	95.4	1,036.5
July	1,484	9,383.6	1,106.7	2,511.3	2,028.4	480.2	4,592.5	400.2	3,487.5	0.3	685.3	94.3	1,078.9
Aug.	1,483	9,380.8	1,062.6	2,551.1	2,072.1	476.5	4,603.9	397.8	3,501.6	0.2	683.3	94.6	1,068.6
Sep.	1,469	9,386.7	1,103.1	2,513.0	2,033.4	477.8	4,625.8	399.7	3,511.4	0.3	694.9	95.4	1,049.5
Oct.	1,459	9,456.7	1,101.0	2,586.1	2,108.1	476.3	4,648.2	415.3	3,531.2	0.3	678.6	95.5	1,025.9
Nov.	1,448	9,556.7	1,117.4	2,597.0	2,123.8	471.7	4,682.2	414.1	3,557.8	0.3	690.1	95.7	1,064.3
Commercial banks [6]													
2021 Oct.	254	3,944.0	584.7	1,115.8	1,031.7	83.4	1,448.9	272.9	958.5	0.2	200.7	32.7	761.8
Nov.	253	4,025.0	592.5	1,129.2	1,047.0	81.5	1,469.9	277.3	968.2	0.2	210.5	32.7	800.7
Big banks [7]													
2021 Oct.	3	2,125.9	181.0	566.7	535.0	31.7	680.0	137.9	441.4	0.0	93.5	26.9	671.2
Nov.	3	2,153.5	182.3	555.9	525.2	30.7	687.7	137.0	445.0	0.0	100.6	26.9	700.8
Regional banks and other commercial banks													
2021 Oct.	141	1,368.8	265.4	361.4	311.1	50.1	654.7	97.3	447.8	0.1	100.9	5.0	82.3
Nov.	140	1,420.7	280.8	378.9	329.5	49.3	664.9	101.4	451.9	0.1	103.6	5.1	91.0
Branches of foreign banks													
2021 Oct.	110	449.3	138.3	187.8	185.7	1.6	114.2	37.7	69.3	0.1	6.4	0.7	8.3
Nov.	110	450.8	129.5	194.4	192.4	1.5	117.2	38.9	71.2	0.0	6.3	0.7	9.0
Landesbanken													
2021 Oct.	6	863.5	121.2	231.8	183.6	48.0	402.0	38.9	321.8	0.0	39.4	8.8	99.7
Nov.	6	879.3	120.2	235.8	187.8	47.7	418.5	38.1	337.4	0.0	40.8	8.8	96.0
Savings banks													
2021 Oct.	371	1,538.6	180.2	168.6	52.2	116.3	1,151.7	47.3	927.2	–	176.7	15.1	23.0
Nov.	371	1,546.1	184.1	165.4	50.0	115.3	1,158.1	47.4	932.2	–	177.8	15.1	23.4
Credit cooperatives													
2021 Oct.	782	1,128.0	64.0	195.7	82.0	113.5	823.7	32.7	668.5	0.0	122.3	18.8	25.9
Nov.	773	1,134.2	66.3	194.9	80.9	113.8	828.2	29.9	675.7	0.0	122.4	18.8	26.0
Mortgage banks													
2021 Oct.	10	248.6	12.6	19.8	11.2	8.3	208.3	2.6	186.9	–	18.7	0.2	7.6
Nov.	9	228.6	11.0	16.0	8.3	7.3	194.7	2.1	175.1	–	17.3	0.1	6.7
Building and loan associations													
2021 Oct.	18	250.6	2.2	42.6	27.0	15.6	202.1	1.0	174.6	.	26.6	0.3	3.5
Nov.	18	252.1	2.6	43.0	27.4	15.7	202.8	1.0	175.3	.	26.5	0.3	3.4
Banks with special, development and other central support tasks													
2021 Oct.	18	1,483.4	136.1	811.7	720.4	91.1	411.5	19.9	293.9	0.0	94.3	19.8	104.4
Nov.	18	1,491.5	140.7	812.8	722.3	90.4	410.0	18.3	293.9	0.0	94.8	19.9	108.1
Memo item: Foreign banks [8]													
2021 Oct.	143	1,623.7	294.4	566.5	529.1	36.8	586.1	115.7	360.8	0.2	100.8	3.6	173.1
Nov.	143	1,655.3	290.7	585.2	548.5	36.1	599.3	122.5	365.4	0.2	103.2	3.6	176.6
of which: Banks majority-owned by foreign banks [9]													
2021 Oct.	33	1,174.3	156.1	378.7	343.4	35.2	471.9	77.9	291.5	0.1	94.4	2.9	164.8
Nov.	33	1,204.6	161.2	390.9	356.1	34.6	482.0	83.6	294.2	0.1	96.9	2.9	167.6

***** Assets and liabilities of monetary financial institutions (MFIs) in Germany. The assets and liabilities of foreign branches, of money market funds (which are also classified as MFIs) and of the Bundesbank are not included. For the definitions of the respective items, see the footnotes to Table IV.3. **1** Owing to the Act Modernising Accounting Law (Gesetz zur Modernisierung des Bilanzrechts) of 25 May 2009, derivative financial instruments in the trading portfolio (trading portfolio derivatives) within the meaning of Section 340e (3) sentence 1 of the German Commercial Code (Handelsgesetzbuch) read in conjunction with Section 35 (1) number 1a of the Credit Institution Accounting Regulation (Verordnung über die Rechnungslegung der Kreditinstitute) are classified under "Other assets and liabilities" as of the December 2010 reporting date. Trading portfolio derivatives are listed separately in the Statistical Series Banking statistics, in Tables I.1 to I.3. **2** For building and loan associations: including deposits under savings

IV. Banks

Deposits of banks (MFIs)			Deposits of non-banks (non-MFIs)											
	of which:			of which:										
					Time deposits [2]			Savings deposits [4]						
Total	Sight deposits	Time deposits	Total	Sight deposits	for up to and including 1 year	for more than 1 year [2]	Memo item: Liabilities arising from repos [3]	Total	of which: At 3 months' notice	Bank savings bonds	Bearer debt securities out-standing [5]	Capital including published reserves, partici-pation rights capital, funds for general banking risks	Other liabi-lities [1]	End of month
All categories of banks														
2,373.2	672.2	1,701.0	4,227.2	2,760.4	232.4	639.4	41.7	568.7	542.7	26.2	1,184.3	560.1	1,010.2	2021 June
2,342.3	661.1	1,681.1	4,256.8	2,797.7	229.1	635.9	49.5	568.1	542.4	26.0	1,179.4	560.4	1,044.8	July
2,334.1	648.3	1,685.8	4,269.4	2,814.9	224.4	636.8	54.7	567.6	542.1	25.8	1,186.0	560.6	1,030.6	Aug.
2,357.7	657.1	1,700.6	4,266.2	2,811.9	228.7	633.3	50.3	566.7	541.4	25.6	1,204.5	562.0	996.3	Sep.
2,394.9	683.5	1,711.4	4,310.0	2,834.1	241.5	642.9	53.7	566.1	541.0	25.4	1,213.2	563.6	975.0	Oct.
2,442.1	700.6	1,741.5	4,317.8	2,857.2	227.1	642.8	47.4	565.8	541.0	24.9	1,225.7	565.0	1,006.1	Nov.
Commercial banks [6]														
1,223.7	504.4	719.3	1,700.1	1,202.5	151.0	234.3	52.5	101.4	97.6	10.9	168.2	187.6	664.4	2021 Oct.
1,262.2	515.7	746.4	1,701.1	1,209.0	145.6	234.3	46.4	101.6	97.8	10.6	172.9	188.7	700.2	Nov.
Big banks [7]														
514.1	210.0	304.1	836.5	592.2	77.6	79.6	38.6	86.0	82.9	1.2	125.5	72.3	577.4	2021 Oct.
515.1	206.5	308.6	831.2	593.9	70.6	79.4	31.5	86.2	83.1	1.2	129.3	73.6	604.2	Nov.
Regional banks and other commercial banks														
460.0	138.6	321.3	687.9	484.7	47.8	130.7	13.8	15.0	14.3	9.7	41.6	101.6	77.7	2021 Oct.
491.2	149.8	341.4	699.6	492.8	51.2	131.4	14.9	15.0	14.3	9.3	42.5	101.3	86.0	Nov.
Branches of foreign banks														
249.6	155.7	93.9	175.7	125.6	25.6	24.0	–	0.4	0.4	0.1	1.0	13.7	9.3	2021 Oct.
255.8	159.5	96.3	170.2	122.3	23.9	23.5	–	0.4	0.4	0.1	1.0	13.8	9.9	Nov.
Landesbanken														
302.2	62.2	240.0	251.0	144.6	33.7	66.7	0.6	6.0	5.9	0.0	179.5	43.2	87.7	2021 Oct.
306.7	66.2	240.6	256.9	151.0	28.6	71.4	0.9	5.9	5.8	0.0	184.5	43.2	88.0	Nov.
Savings banks														
199.4	5.1	194.3	1,142.1	831.4	10.0	13.3	–	277.0	260.4	10.4	17.1	132.0	48.1	2021 Oct.
200.0	4.7	195.3	1,149.3	838.6	10.2	13.2	–	277.0	260.5	10.3	16.7	132.0	48.1	Nov.
Credit cooperatives														
163.8	1.5	162.3	826.2	598.9	27.4	14.8	–	181.2	176.6	3.9	9.6	94.3	34.0	2021 Oct.
165.3	1.4	163.9	830.5	603.0	27.3	15.5	–	180.8	176.3	3.8	9.6	94.5	34.2	Nov.
Mortgage banks														
61.1	2.3	58.8	59.3	1.9	4.5	52.9	–	–	–	.	106.0	10.0	12.2	2021 Oct.
60.2	2.1	58.1	53.8	2.0	4.1	47.7	–	–	–	.	98.4	10.0	6.2	Nov.
Building and loan associations														
31.1	1.8	29.2	192.1	3.5	1.5	186.5	–	0.5	0.5	0.1	4.3	12.4	10.9	2021 Oct.
32.6	2.3	30.3	192.1	3.7	1.6	186.3	–	0.5	0.5	0.1	4.3	12.4	10.8	Nov.
Banks with special, development and other central support tasks														
413.6	106.2	307.4	139.3	51.3	13.4	74.4	0.6	–	–	.	728.6	84.1	117.8	2021 Oct.
415.1	108.2	306.9	134.2	50.0	9.7	74.4	0.1	–	–	.	739.4	84.1	118.7	Nov.
Memo item: Foreign banks [8]														
667.2	303.2	364.0	659.8	494.6	53.8	88.1	10.6	20.2	19.9	3.0	40.7	79.7	176.3	2021 Oct.
697.3	317.8	379.5	658.3	496.2	50.3	88.6	8.8	20.3	20.0	2.9	41.5	79.7	178.5	Nov.
of which: Banks majority-owned by foreign banks [9]														
417.6	147.5	270.1	484.1	369.0	28.3	64.1	10.6	19.8	19.5	2.9	39.7	66.0	167.0	2021 Oct.
441.4	158.3	283.1	488.1	373.9	26.4	65.1	8.8	19.9	19.5	2.9	40.5	66.0	168.6	Nov.

and loan contracts (see Table IV.12). **3** Included in time deposits. **4** Excluding deposits under savings and loan contracts (see also footnote 2). **5** Including subordinated negotiable bearer debt securities; excluding non-negotiable bearer debt securities. **6** Commercial banks comprise the sub-groups "Big banks", "Regional banks and other commercial banks" and "Branches of foreign banks". **7** Deutsche Bank AG, Dresdner Bank AG (up to Nov. 2009), Commerzbank AG, UniCredit Bank AG (formerly Bayerische Hypo- und Vereinsbank AG), Deutsche Postbank AG (from December 2004 up to April 2018) and DB Privat- und Firmenkundenbank AG (from May 2018) (see the explanatory notes in the Statistical Series Banking statistics, Table I.3, banking group "Big banks "). **8** Sum of the banks majority-owned by foreign banks and included in other categories of banks and the category "Branches (with dependent legal status) of foreign banks". **9** Separate presentation of the banks majority-owned by foreign banks included in other banking categories.

IV. Banks

3. Assets and liabilities of banks (MFIs) in Germany vis-à-vis residents *

€ billion

Period	Cash in hand (euro area banknotes and coins)	Credit balances with the Bundesbank	Lending to domestic banks (MFIs)						Lending to domestic non-banks (non-MFIs)				
			Total	Credit balances and loans	Bills	Negotiable money market paper issued by banks	Securities issued by banks	Memo item: Fiduciary loans	Total	Loans	Bills	Treasury bills and negotiable money market paper issued by non-banks	Securities issued by non-banks [1]
													End of year or month *
2011	15.8	93.8	1,725.6	1,267.9	–	7.1	450.7	2.1	3,197.8	2,774.6	0.8	6.4	415.9
2012	18.5	134.3	1,655.0	1,229.1	–	2.4	423.5	2.4	3,220.4	2,785.5	0.6	2.2	432.1
2013	18.5	85.6	1,545.6	1,153.1	0.0	1.7	390.8	2.2	3,131.6	2,692.6	0.5	1.2	437.2
2014	18.9	81.3	1,425.9	1,065.6	0.0	2.1	358.2	1.7	3,167.3	2,712.2	0.4	0.7	454.0
2015	19.2	155.0	1,346.6	1,062.6	0.0	1.7	282.2	1.7	3,233.9	2,764.0	0.4	0.4	469.0
2016	25.8	284.0	1,364.9	1,099.8	0.0	0.8	264.3	2.0	3,274.3	2,823.8	0.3	0.4	449.8
2017	31.9	392.5	1,407.5	1,163.4	0.0	0.7	243.4	1.9	3,332.6	2,894.0	0.4	0.7	437.5
2018	40.4	416.1	1,323.5	1,083.8	0.0	0.8	239.0	5.9	3,394.5	2,990.2	0.2	0.2	403.9
2019	43.2	476.6	1,254.7	1,016.2	0.0	0.7	237.9	4.5	3,521.5	3,119.2	0.3	3.3	398.7
2020	47.2	792.9	1,367.9	1,119.7	0.0	0.7	247.5	8.8	3,647.0	3,245.1	0.2	4.0	397.7
2020 June	45.7	767.6	1,270.4	1,019.6	0.0	1.1	249.6	6.9	3,621.1	3,206.6	0.2	8.0	406.2
July	45.2	810.5	1,270.5	1,019.2	0.0	1.2	250.0	7.5	3,625.7	3,217.2	0.2	8.0	400.3
Aug.	45.7	760.8	1,348.1	1,096.7	0.0	1.1	250.3	7.8	3,629.7	3,219.6	0.2	9.4	400.5
Sep.	45.8	884.4	1,293.9	1,041.1	0.0	1.0	251.8	8.3	3,634.2	3,224.4	0.2	8.4	401.3
Oct.	46.1	811.0	1,397.3	1,145.2	0.0	0.8	251.2	8.6	3,651.1	3,237.6	0.2	9.0	404.3
Nov.	45.4	863.2	1,351.9	1,101.3	0.0	0.8	249.8	8.6	3,661.1	3,247.4	0.2	7.6	405.8
Dec.	47.2	792.9	1,367.9	1,119.7	0.0	0.7	247.5	8.8	3,647.0	3,245.1	0.2	4.0	397.7
2021 Jan.	44.6	1,009.1	1,283.1	1,032.1	0.0	0.7	250.2	9.2	3,654.0	3,250.7	0.3	6.6	396.3
Feb.	45.0	929.2	1,382.3	1,130.2	0.0	1.0	251.1	9.6	3,669.3	3,261.7	0.2	7.4	400.0
Mar.	45.5	983.4	1,419.4	1,160.8	0.0	0.9	257.7	9.8	3,699.1	3,287.5	0.2	6.7	404.7
Apr.	44.7	1,062.1	1,362.4	1,105.7	0.0	0.9	255.8	9.8	3,693.9	3,287.5	0.2	5.6	400.5
May	45.4	1,044.7	1,423.6	1,167.3	0.0	0.9	255.4	10.1	3,709.6	3,300.2	0.1	4.6	404.7
June	46.1	1,042.8	1,409.7	1,153.8	0.0	0.8	255.1	10.3	3,709.2	3,305.7	0.2	5.8	397.6
July	46.3	1,059.2	1,372.0	1,118.1	0.0	0.8	253.2	10.3	3,725.3	3,322.9	0.2	6.1	396.2
Aug.	46.5	1,015.2	1,425.2	1,172.4	0.0	0.8	252.1	10.3	3,736.4	3,332.8	0.1	5.7	397.8
Sep.	47.1	1,054.9	1,399.9	1,147.7	0.0	0.7	251.5	10.3	3,749.8	3,341.9	0.1	4.4	403.3
Oct.	47.6	1,052.4	1,419.3	1,167.7	0.0	0.7	250.9	10.3	3,770.2	3,366.9	0.2	5.0	398.0
Nov.	47.9	1,068.7	1,432.3	1,183.6	–	0.7	248.0	10.0	3,794.4	3,386.4	0.1	5.6	402.3
													Changes *
2012	+ 2.7	+ 40.5	– 68.6	– 37.5	–	– 4.6	– 26.5	+ 0.1	+ 21.0	+ 9.8	– 0.2	– 4.3	+ 15.7
2013	+ 0.0	– 48.8	– 204.1	– 170.6	+ 0.0	– 0.7	– 32.7	– 0.2	+ 4.4	+ 0.3	– 0.1	– 0.6	+ 4.8
2014	+ 0.4	– 4.3	– 119.3	– 87.1	+ 0.0	+ 0.4	– 32.6	+ 0.1	+ 36.7	+ 20.6	– 0.1	– 0.6	+ 16.8
2015	+ 0.3	+ 73.7	– 80.7	– 4.3	– 0.0	– 0.4	– 75.9	– 0.1	+ 68.9	+ 54.1	– 0.0	– 0.3	+ 15.1
2016	+ 6.5	+ 129.1	+ 48.1	+ 66.9	–	– 0.9	– 17.9	+ 0.4	+ 43.7	+ 62.8	– 0.1	– 0.1	– 18.9
2017	+ 6.1	+ 108.4	+ 50.3	+ 70.4	– 0.0	+ 0.0	– 20.1	– 0.1	+ 57.0	+ 70.2	+ 0.0	+ 0.4	– 13.6
2018	+ 8.5	+ 24.0	– 81.0	– 76.6	+ 0.0	+ 0.1	– 4.4	+ 3.8	+ 71.5	+ 105.4	– 0.1	– 0.5	– 33.2
2019	+ 2.8	+ 59.7	– 63.0	– 61.1	– 0.0	– 0.2	– 1.6	– 1.4	+ 126.7	+ 129.1	+ 0.1	+ 3.1	– 5.5
2020	+ 4.1	+ 316.4	+ 201.2	+ 191.6	– 0.0	+ 0.0	+ 9.6	+ 4.3	+ 123.2	+ 123.6	– 0.1	+ 0.7	– 1.0
2020 June	– 2.1	+ 181.4	– 21.4	– 25.0	–	– 0.0	+ 3.6	+ 0.9	+ 0.2	+ 2.4	+ 0.0	– 2.1	– 0.2
July	– 0.5	+ 42.9	+ 0.1	– 0.4	–	+ 0.1	+ 0.4	+ 0.6	+ 4.6	+ 10.5	– 0.0	+ 0.0	– 5.9
Aug.	+ 0.5	– 49.7	+ 77.6	+ 77.5	– 0.0	– 0.2	+ 0.3	+ 0.3	+ 4.0	+ 2.4	+ 0.0	+ 1.4	+ 0.2
Sep.	+ 0.1	+ 123.6	– 54.2	– 55.6	+ 0.0	– 0.0	+ 1.5	+ 0.5	+ 4.6	+ 4.8	+ 0.0	– 1.0	+ 0.7
Oct.	+ 0.2	– 73.5	+ 103.4	+ 104.2	–	– 0.2	– 0.6	+ 0.3	+ 16.5	+ 12.9	+ 0.0	+ 0.6	+ 3.0
Nov.	– 0.6	+ 52.3	– 17.1	– 15.6	– 0.0	– 0.0	– 1.5	– 0.0	+ 10.6	+ 10.5	– 0.0	– 1.4	+ 1.6
Dec.	+ 1.8	– 70.3	+ 16.0	+ 18.4	–	– 0.1	– 2.3	+ 0.2	– 14.1	– 2.3	+ 0.0	– 3.6	– 8.1
2021 Jan.	– 2.6	+ 216.2	– 84.9	– 87.8	+ 0.0	+ 0.0	+ 2.8	+ 0.4	+ 6.6	+ 5.3	+ 0.0	+ 2.6	– 1.4
Feb.	+ 0.3	– 79.9	+ 98.9	+ 97.8	–	+ 0.3	+ 0.8	+ 0.4	+ 15.3	+ 11.0	– 0.0	+ 0.7	+ 3.6
Mar.	+ 0.6	+ 54.3	+ 37.1	+ 30.6	–	– 0.1	+ 6.6	+ 0.2	+ 29.7	+ 25.6	– 0.0	– 1.4	+ 5.4
Apr.	– 0.8	+ 78.7	– 56.7	– 54.9	– 0.0	– 0.1	– 1.7	+ 0.0	– 5.2	+ 0.0	– 0.0	– 1.1	– 4.1
May	+ 0.8	– 17.5	+ 61.2	+ 61.6	–	+ 0.0	– 0.4	+ 0.4	+ 15.6	+ 12.5	– 0.0	– 1.1	+ 4.2
June	+ 0.6	– 1.9	– 13.6	– 13.3	– 0.0	– 0.1	– 0.3	+ 0.1	– 0.4	+ 5.5	+ 0.0	+ 1.3	– 7.1
July	+ 0.2	+ 15.3	– 35.1	– 33.1	–	– 0.0	– 1.9	+ 0.1	+ 16.1	+ 17.2	+ 0.0	+ 0.3	– 1.4
Aug.	+ 0.2	– 43.8	+ 53.4	+ 54.4	–	+ 0.1	– 1.1	– 0.0	+ 10.9	+ 9.7	– 0.0	– 0.5	+ 1.7
Sep.	+ 0.6	+ 39.7	– 26.2	– 25.5	+ 0.0	– 0.1	– 0.6	– 0.0	+ 13.5	+ 9.2	+ 0.0	– 1.2	+ 5.4
Oct.	+ 0.5	– 2.4	+ 19.5	+ 20.0	+ 0.0	– 0.0	– 0.5	– 0.1	+ 20.5	+ 25.1	+ 0.0	+ 0.6	– 5.2
Nov.	+ 0.3	+ 16.6	+ 13.0	+ 15.9	– 0.0	– 0.0	– 2.9	– 0.3	+ 25.9	+ 20.5	– 0.0	+ 0.6	+ 4.9

***** See Table IV.2, footnote *; statistical breaks have been eliminated from the changes. The figures for the latest date are always to be regarded as provisional. Subsequent revisions, which appear in the following Monthly Report, are not specially marked. **1** Excluding debt securities arising from the exchange of equalisation claims (see also footnote 2). **2** Including debt securities arising from the exchange of equalisation claims. **3** Including liabilities arising from registered debt securities, registered money market paper and non-negotiable bearer debt securities;

IV. Banks

Equalisation claims [2]	Memo item: Fiduciary loans	Participating interests in domestic banks and enterprises	Deposits of domestic banks (MFIs) [3] Total	Sight deposits [4]	Time deposits [4]	Redis-counted bills [5]	Memo item: Fiduciary loans	Deposits of domestic non-banks (non-MFIs) Total	Sight deposits	Time deposits [6]	Savings deposits [7]	Bank savings bonds [8]	Memo item: Fiduciary loans	Period
End of year or month *														
–	36.3	94.6	1,210.5	114.8	1,095.3	0.0	36.1	3,045.5	1,168.3	1,156.2	616.1	104.8	36.5	2011
–	34.8	90.0	1,135.5	132.9	1,002.6	0.0	36.3	3,090.2	1,306.5	1,072.5	617.6	93.6	34.9	2012
–	31.6	92.3	1,140.3	125.6	1,014.7	0.0	33.2	3,048.7	1,409.9	952.0	610.1	76.6	32.9	2013
–	26.5	94.3	1,111.9	127.8	984.0	0.0	11.7	3,118.2	1,517.8	926.7	607.8	66.0	30.9	2014
–	20.4	89.6	1,065.6	131.1	934.5	0.0	6.1	3,224.7	1,673.7	898.4	596.5	56.1	29.3	2015
–	19.1	91.0	1,032.9	129.5	903.3	0.1	5.6	3,326.7	1,798.2	889.6	588.5	50.4	28.8	2016
–	19.1	88.1	1,048.2	110.7	937.4	0.0	5.1	3,420.9	1,941.0	853.2	582.9	43.7	30.0	2017
–	18.0	90.9	1,020.9	105.5	915.4	0.0	4.7	3,537.6	2,080.1	841.5	578.6	37.3	33.9	2018
–	17.3	90.4	1,010.2	107.2	902.9	0.0	4.4	3,661.0	2,236.3	816.2	575.2	33.2	32.5	2019
–	23.5	78.3	1,236.7	125.0	1,111.6	0.0	13.1	3,885.2	2,513.0	783.3	560.6	28.3	34.4	2020
–	20.8	78.8	1,229.5	131.4	1,098.1	0.0	9.4	3,766.3	2,385.3	788.2	562.6	30.3	33.4	2020 June
–	22.2	79.3	1,207.9	125.0	1,082.8	0.0	11.1	3,803.4	2,414.0	798.6	560.9	29.9	33.8	July
–	22.5	79.2	1,211.5	126.2	1,085.3	0.0	11.5	3,820.8	2,427.7	802.9	560.6	29.6	34.0	Aug.
–	22.7	79.2	1,251.5	123.8	1,127.8	0.0	12.0	3,834.2	2,442.8	802.0	560.1	29.3	34.3	Sep.
–	22.8	79.4	1,263.7	131.5	1,132.2	0.0	12.3	3,874.1	2,481.4	804.1	559.7	28.9	34.6	Oct.
–	22.9	78.1	1,244.8	134.6	1,110.2	0.0	12.5	3,894.3	2,515.3	790.9	559.6	28.5	34.4	Nov.
–	23.5	78.3	1,236.7	125.0	1,111.6	0.0	13.1	3,885.2	2,513.0	783.3	560.6	28.3	34.4	Dec.
–	23.7	78.2	1,261.6	140.5	1,121.2	0.0	13.6	3,904.5	2,542.0	773.1	561.6	27.9	34.3	2021 Jan.
–	24.0	78.2	1,260.6	138.0	1,122.5	0.0	14.2	3,913.7	2,557.5	766.1	562.6	27.5	34.3	Feb.
–	24.3	78.3	1,336.0	135.4	1,200.6	0.0	14.7	3,925.8	2,575.2	761.2	562.3	27.1	34.4	Mar.
–	24.5	77.7	1,343.0	136.2	1,206.8	0.0	15.1	3,935.7	2,594.6	751.6	562.8	26.8	34.4	Apr.
–	24.7	78.6	1,351.9	140.0	1,211.9	0.0	15.5	3,956.3	2,620.5	746.2	563.2	26.3	34.6	May
–	25.0	78.7	1,357.0	132.7	1,224.3	0.0	15.8	3,936.4	2,612.1	735.7	562.6	26.1	34.6	June
–	25.1	78.1	1,360.7	136.1	1,224.5	0.0	15.9	3,964.6	2,646.0	730.7	562.0	25.9	34.5	July
–	25.2	78.2	1,364.7	135.3	1,229.4	0.0	16.1	3,971.0	2,656.0	727.8	561.5	25.6	34.3	Aug.
–	25.2	79.0	1,353.8	128.9	1,224.9	0.0	16.2	3,960.3	2,647.9	726.1	560.7	25.5	34.1	Sep.
–	25.1	79.0	1,363.6	132.9	1,230.7	0.0	16.2	3,989.1	2,664.3	739.3	560.1	25.3	33.9	Oct.
–	25.2	79.1	1,373.9	135.2	1,238.6	0.0	16.3	4,002.7	2,685.9	732.2	559.9	24.8	33.6	Nov.
Changes *														
–	– 1.3	– 4.1	– 70.8	+ 21.5	– 91.9	– 0.0	+ 0.2	+ 42.2	+ 138.7	– 86.7	+ 1.5	– 11.2	– 1.6	2012
–	– 3.3	+ 2.4	– 79.4	– 24.1	– 55.3	+ 0.0	– 3.4	+ 40.2	+ 118.4	– 53.9	– 7.4	– 17.0	– 1.7	2013
–	– 1.9	+ 2.0	– 29.0	+ 2.2	– 31.2	– 0.0	– 0.6	+ 69.7	+ 107.9	– 25.3	– 2.4	– 10.6	– 2.0	2014
–	– 2.1	– 4.3	– 46.6	+ 3.3	– 50.0	+ 0.0	– 1.3	+ 106.5	+ 156.2	– 28.3	– 11.3	– 10.1	– 1.6	2015
–	– 1.3	+ 1.5	– 1.7	+ 0.3	– 2.0	+ 0.0	– 0.5	+ 104.7	+ 124.5	– 6.9	– 7.9	– 5.0	– 0.5	2016
–	– 0.0	– 1.6	+ 11.0	– 18.4	+ 29.4	– 0.0	– 0.5	+ 103.1	+ 142.8	– 27.5	– 5.6	– 6.7	+ 0.4	2017
–	– 1.0	+ 3.1	– 25.0	– 3.1	– 21.9	+ 0.0	– 0.4	+ 117.7	+ 139.3	– 10.8	– 4.3	– 6.5	+ 3.9	2018
–	– 0.7	+ 0.1	– 8.6	+ 1.6	– 10.2	+ 0.0	– 0.3	+ 122.5	+ 155.8	– 25.7	– 3.4	– 4.1	– 1.4	2019
–	+ 5.7	– 3.3	+ 313.4	+ 23.2	+ 290.2	– 0.0	+ 8.2	+ 221.6	+ 273.7	– 32.7	– 14.5	– 4.9	+ 1.9	2020
–	+ 1.5	+ 0.0	+ 118.6	– 0.2	+ 118.8	– 0.0	+ 2.3	– 9.0	+ 8.8	– 16.4	– 1.1	– 0.4	+ 0.1	2020 June
–	+ 0.9	+ 0.5	– 21.7	– 6.4	– 15.2	– 0.0	+ 1.2	+ 37.1	+ 28.7	+ 10.5	– 1.6	– 0.4	+ 0.4	July
–	+ 0.3	– 0.1	+ 3.7	+ 1.2	+ 2.4	+ 0.0	+ 0.4	+ 17.4	+ 13.6	+ 4.3	– 0.2	– 0.3	+ 0.2	Aug.
–	+ 0.2	+ 0.0	+ 40.0	– 2.5	+ 42.5	+ 0.0	+ 0.5	+ 13.4	+ 15.1	– 0.9	– 0.5	– 0.4	+ 0.3	Sep.
–	+ 0.1	+ 0.2	+ 12.2	+ 7.7	+ 4.4	–	+ 0.2	+ 40.0	+ 38.6	+ 2.2	– 0.4	– 0.4	+ 0.3	Oct.
–	+ 0.2	+ 0.1	+ 8.3	+ 3.5	+ 4.8	– 0.0	+ 0.3	+ 20.5	+ 34.1	– 13.2	– 0.1	– 0.3	– 0.2	Nov.
–	+ 0.6	+ 0.1	– 8.1	– 9.6	+ 1.5	–	+ 0.5	– 9.2	– 2.3	– 7.6	+ 1.0	– 0.2	– 0.0	Dec.
–	+ 0.2	– 0.1	+ 24.9	+ 15.7	+ 9.2	+ 0.0	+ 0.5	+ 19.2	+ 28.9	– 10.3	+ 1.1	– 0.4	– 0.1	2021 Jan.
–	+ 0.3	+ 0.1	– 1.2	– 2.4	+ 1.2	– 0.0	+ 0.6	+ 9.1	+ 15.4	– 7.0	+ 1.0	– 0.4	– 0.0	Feb.
–	+ 0.3	+ 0.1	+ 75.1	– 2.6	+ 77.7	–	+ 0.5	+ 12.2	+ 17.7	– 4.8	– 0.3	– 0.4	+ 0.1	Mar.
–	+ 0.2	– 0.6	+ 7.1	+ 0.8	+ 6.3	+ 0.0	+ 0.3	+ 9.8	+ 19.6	– 9.8	+ 0.4	– 0.3	– 0.0	Apr.
–	+ 0.3	+ 0.3	+ 8.9	+ 3.9	+ 5.0	–	+ 0.5	+ 20.6	+ 26.0	– 5.3	+ 0.5	– 0.5	+ 0.2	May
–	+ 0.2	+ 0.1	+ 5.0	– 7.3	+ 12.3	+ 0.0	+ 0.3	– 19.8	– 8.5	– 10.5	– 0.6	– 0.2	– 0.0	June
–	+ 0.1	+ 0.1	+ 6.6	+ 3.5	+ 3.1	–	+ 0.1	+ 28.2	+ 33.9	– 5.0	– 0.6	– 0.2	– 0.1	July
–	+ 0.2	+ 0.1	+ 4.1	– 0.8	+ 4.9	– 0.0	+ 0.2	+ 6.4	+ 10.0	– 2.9	– 0.5	– 0.2	– 0.2	Aug.
–	+ 0.0	+ 0.7	– 10.6	– 6.4	– 4.2	+ 0.0	+ 0.1	– 6.7	– 5.4	– 0.3	– 0.8	– 0.2	– 0.2	Sep.
–	– 0.1	+ 0.1	+ 10.5	+ 4.0	+ 6.5	+ 0.0	+ 0.0	+ 28.8	+ 16.4	+ 13.2	– 0.6	– 0.2	– 0.2	Oct.
–	+ 0.1	+ 0.1	+ 10.2	+ 2.2	+ 8.0	–	+ 0.1	+ 13.7	+ 21.5	– 7.2	– 0.2	– 0.3	– 0.3	Nov.

including subordinated liabilities. **4** Including liabilities arising from monetary policy operations with the Bundesbank. **5** Own acceptances and promissory notes outstanding. **6** Since the inclusion of building and loan associations in January 1999, including deposits under savings and loan contracts (see Table IV.12). **7** Excluding deposits under savings and loan contracts (see also footnote 8). **8** Including liabilities arising from non-negotiable bearer debt securities.

IV. Banks

4. Assets and liabilities of banks (MFIs) in Germany vis-à-vis non-residents *

€ billion

Period	Cash in hand (non-euro area banknotes and coins)	Lending to foreign banks (MFIs)							Lending to foreign non-banks (non-MFIs)					
		Total	Credit balances and loans, bills			Negotiable money market paper issued by banks	Securities issued by banks	Memo item: Fiduciary loans	Total	Loans and bills			Treasury bills and negotiable money market paper issued by non-banks	Securities issued by non-banks
			Total	Short-term	Medium and long-term					Total	Short-term	Medium and long-term		
	End of year or month *													
2011	0.6	1,117.6	871.0	566.3	304.8	4.6	241.9	2.6	744.4	455.8	102.0	353.8	8.5	280.1
2012	0.8	1,046.0	813.5	545.5	268.1	5.4	227.0	2.6	729.0	442.2	105.1	337.1	9.0	277.8
2013	0.2	1,019.7	782.4	546.6	235.8	7.2	230.1	2.5	701.0	404.9	100.3	304.6	8.2	287.8
2014	0.2	1,125.2	884.8	618.7	266.1	7.9	232.5	1.1	735.1	415.2	94.4	320.8	6.5	313.5
2015	0.3	1,066.9	830.7	555.9	274.7	1.2	235.0	1.0	751.5	424.3	83.8	340.5	7.5	319.7
2016	0.3	1,055.9	820.6	519.8	300.7	0.5	234.9	1.0	756.2	451.6	90.1	361.4	5.0	299.6
2017	0.3	963.8	738.2	441.0	297.2	0.7	225.0	2.3	723.9	442.2	93.3	348.9	4.2	277.5
2018	0.2	1,014.1	771.9	503.8	268.1	1.0	241.3	3.0	762.0	489.6	99.9	389.7	4.3	268.1
2019	0.2	1,064.2	814.0	532.7	281.3	1.8	248.5	3.7	795.3	513.1	111.0	402.1	7.7	274.5
2020	0.2	1,024.3	784.8	532.1	252.8	2.6	236.8	4.0	822.8	523.0	125.4	397.5	11.3	288.5
2020 June	0.3	1,113.8	860.8	592.4	268.5	3.7	249.3	3.8	838.4	538.2	134.7	403.5	15.8	284.5
July	0.3	1,083.1	834.0	574.4	259.6	3.4	245.7	3.9	829.1	536.3	138.8	397.5	15.1	277.6
Aug.	0.3	1,066.8	821.2	563.3	257.9	3.5	242.1	4.1	819.9	531.3	133.7	397.6	15.6	272.9
Sep.	0.2	1,084.3	841.3	583.4	257.9	3.6	239.4	4.1	821.9	530.4	130.3	400.2	15.2	276.3
Oct.	0.3	1,064.7	822.9	564.5	258.5	3.5	238.3	4.1	839.8	539.3	137.7	401.6	16.5	284.1
Nov.	0.2	1,056.0	815.8	563.4	252.4	3.5	236.7	4.0	845.6	539.5	139.8	399.7	14.0	292.1
Dec.	0.2	1,024.3	784.8	532.1	252.8	2.6	236.8	4.0	822.8	523.0	125.4	397.5	11.3	288.5
2021 Jan.	0.2	1,135.1	897.8	645.6	252.2	2.6	234.7	3.8	846.9	538.6	142.7	395.8	14.0	294.3
Feb.	0.6	1,146.4	912.7	659.6	253.1	2.2	231.5	3.8	853.6	548.2	150.4	397.7	14.7	290.7
Mar.	0.2	1,140.4	908.0	646.7	261.3	2.3	230.1	3.8	864.8	559.3	153.3	406.1	11.9	293.5
Apr.	0.2	1,172.3	943.1	680.7	262.3	2.3	227.0	3.9	855.5	555.5	152.6	402.9	13.0	287.0
May	0.2	1,157.2	928.1	669.8	258.3	2.4	226.8	3.9	846.1	550.1	147.3	402.8	11.9	284.2
June	0.4	1,159.3	930.3	666.6	263.7	2.5	226.4	3.9	855.1	551.6	146.7	404.9	10.5	293.0
July	0.4	1,139.3	910.4	651.3	259.1	1.9	227.0	3.8	867.2	565.0	158.4	406.6	13.1	289.2
Aug.	0.4	1,125.9	899.8	647.9	251.8	1.6	224.5	3.7	867.4	566.7	158.7	407.9	15.3	285.5
Sep.	0.3	1,113.1	885.7	634.6	251.1	1.1	226.3	3.6	876.0	569.3	156.6	412.7	15.1	291.6
Oct.	0.3	1,166.7	940.5	672.2	268.2	0.9	225.3	3.5	878.0	579.6	164.1	415.5	17.7	280.6
Nov.	0.3	1,164.8	940.3	674.7	265.6	0.8	223.7	3.4	887.7	585.6	164.4	421.2	14.3	287.8
	Changes *													
2012	+ 0.1	− 70.1	− 56.8	− 23.1	− 33.7	+ 0.9	− 14.1	− 0.1	− 9.4	− 7.5	+ 8.3	− 15.9	+ 0.6	− 2.5
2013	− 0.5	− 22.7	− 26.9	− 1.3	− 25.6	+ 1.8	+ 2.4	− 0.0	− 21.2	− 33.1	− 5.8	− 27.2	− 0.7	+ 12.6
2014	− 0.0	+ 86.1	+ 80.1	+ 63.2	+ 16.8	+ 0.7	+ 5.3	− 0.6	+ 5.7	− 10.2	− 12.8	+ 2.7	− 1.8	+ 17.7
2015	+ 0.1	− 91.8	− 86.0	− 82.2	− 3.8	− 6.7	+ 0.8	− 0.1	− 6.1	− 9.2	− 6.5	− 2.7	+ 1.1	+ 2.0
2016	+ 0.0	− 25.5	− 14.5	− 38.2	+ 23.7	− 0.7	− 10.3	− 0.0	+ 17.4	+ 28.9	+ 10.1	+ 18.8	− 3.0	− 8.5
2017	+ 0.0	− 57.2	− 48.7	− 61.5	+ 12.8	+ 0.0	− 8.5	+ 0.6	− 4.7	+ 13.0	+ 8.6	+ 4.4	+ 0.7	− 18.4
2018	+ 0.0	+ 49.6	+ 34.0	+ 57.7	− 23.7	+ 0.2	+ 15.3	+ 0.7	+ 18.3	+ 28.3	+ 3.2	+ 25.2	− 0.4	− 9.7
2019	− 0.0	− 4.1	− 11.3	− 21.9	+ 10.7	+ 0.8	+ 6.3	+ 0.7	+ 26.8	+ 19.9	+ 12.7	+ 7.3	+ 3.0	+ 3.8
2020	− 0.0	− 32.0	− 22.4	− 6.6	− 15.8	+ 0.9	− 10.5	+ 0.3	+ 34.4	+ 14.7	+ 9.0	+ 5.7	+ 3.6	+ 16.1
2020 June	+ 0.0	− 23.5	− 21.8	− 19.6	− 2.2	+ 0.3	− 2.0	+ 0.1	− 9.8	− 19.7	− 17.5	− 2.2	+ 3.7	+ 6.2
July	− 0.0	− 17.9	− 14.4	− 11.2	− 3.2	− 0.2	− 3.3	+ 0.1	− 0.9	+ 5.3	+ 5.9	− 0.6	− 0.7	− 5.4
Aug.	− 0.0	− 14.4	− 11.1	− 10.0	− 1.1	+ 0.1	− 3.4	+ 0.1	− 8.4	− 4.2	− 4.8	+ 0.6	+ 0.5	− 4.7
Sep.	− 0.0	+ 13.9	+ 16.6	+ 18.2	− 1.6	+ 0.1	− 2.8	− 0.0	+ 0.1	− 2.5	− 3.8	+ 1.3	− 0.4	+ 3.0
Oct.	+ 0.0	− 20.8	− 19.5	− 19.8	+ 0.3	− 0.1	− 1.2	+ 0.1	+ 16.7	+ 7.8	+ 6.9	+ 0.9	+ 1.3	+ 7.6
Nov.	− 0.0	− 3.4	− 1.9	+ 1.8	− 3.7	− 0.0	− 1.5	− 0.1	+ 9.7	+ 3.6	+ 2.8	+ 0.8	− 2.5	+ 8.6
Dec.	− 0.0	− 26.9	− 26.3	− 28.9	+ 2.6	− 0.9	+ 0.2	− 0.1	− 19.3	− 13.7	− 13.6	− 0.0	− 2.7	− 3.0
2021 Jan.	− 0.0	+ 106.1	+ 108.3	+ 110.3	− 1.9	− 0.1	− 2.1	− 0.1	+ 22.5	+ 14.5	+ 17.8	− 3.3	+ 2.7	+ 5.3
Feb.	+ 0.3	+ 11.1	+ 14.7	+ 14.0	+ 0.7	− 0.4	− 3.2	− 0.1	+ 6.3	+ 9.0	+ 7.5	+ 1.5	+ 0.7	− 3.5
Mar.	− 0.3	− 11.7	− 10.1	− 15.8	+ 5.6	+ 0.1	− 1.7	+ 0.0	+ 3.9	+ 4.9	+ 0.7	+ 4.1	− 2.8	+ 1.8
Apr.	− 0.0	+ 37.7	+ 40.7	+ 36.8	+ 3.9	− 0.1	− 2.9	+ 0.1	− 4.0	+ 0.6	+ 0.7	− 0.0	+ 1.1	− 5.6
May	+ 0.0	− 14.9	− 14.6	− 11.5	− 3.1	− 0.1	− 0.3	+ 0.0	− 7.7	− 4.2	− 4.4	+ 0.2	− 0.9	− 2.6
June	+ 0.2	− 4.1	− 3.7	− 6.3	+ 2.6	+ 0.1	− 0.5	− 0.0	+ 4.9	− 1.8	− 1.7	− 0.2	− 1.5	+ 8.2
July	+ 0.0	− 21.8	− 20.5	− 15.7	− 4.8	− 0.6	− 0.7	− 0.1	+ 12.9	+ 13.0	+ 11.7	+ 1.4	+ 2.6	− 2.8
Aug.	− 0.0	− 13.9	− 11.2	− 3.6	− 7.6	− 0.2	− 2.5	− 0.1	− 0.1	+ 1.4	+ 0.3	+ 1.1	+ 2.2	− 3.8
Sep.	− 0.1	− 18.7	− 19.8	− 17.0	− 2.9	− 0.6	+ 1.7	− 0.1	+ 10.0	+ 4.6	+ 1.2	+ 3.4	− 0.2	+ 5.6
Oct.	+ 0.0	+ 54.3	+ 55.5	+ 38.3	+ 17.3	− 0.1	− 1.1	− 0.1	+ 1.5	+ 9.9	+ 7.6	+ 2.3	+ 2.6	− 11.0
Nov.	− 0.0	− 7.1	− 5.3	− 0.0	− 5.2	− 0.1	− 1.8	− 0.1	+ 6.4	+ 3.2	+ 1.1	+ 2.0	− 3.4	+ 6.6

* See Table IV.2, footnote *; statistical breaks have been eliminated from the changes. The figures for the latest date are always to be regarded as provisional. Subsequent revisions, which appear in the following Monthly Report, are not specially marked.

IV. Banks

Memo item: Fiduciary loans	Participating interests in foreign banks and enterprises	Deposits of foreign banks (MFIs)						Deposits of foreign non-banks (non-MFIs)						Period
		Total	Sight deposits	Time deposits (including bank savings bonds)			Memo item: Fiduciary loans	Total	Sight deposits	Time deposits (including savings deposits and bank savings bonds)			Memo item: Fiduciary loans	
				Total	Short-term	Medium and long-term				Total	Short-term	Medium and long-term		
End of year or month *														
32.9	45.0	655.7	242.6	413.1	289.4	123.7	0.1	225.9	92.3	133.6	66.9	66.6	1.3	2011
32.6	46.4	691.1	289.4	401.7	284.6	117.0	0.1	237.6	107.2	130.3	69.1	61.2	1.2	2012
30.8	39.0	515.7	222.6	293.2	196.0	97.2	0.1	257.8	118.1	139.7	76.8	62.9	1.0	2013
14.0	35.6	609.2	277.1	332.1	242.7	89.4	0.1	221.0	113.0	107.9	47.8	60.1	0.7	2014
13.1	30.5	611.9	323.4	288.5	203.8	84.7	0.1	201.1	102.6	98.5	49.3	49.2	0.7	2015
13.1	28.7	696.1	374.4	321.6	234.2	87.5	0.0	206.2	100.3	105.9	55.2	50.8	0.7	2016
12.1	24.3	659.0	389.6	269.4	182.4	87.0	0.0	241.2	109.4	131.8	68.1	63.8	0.3	2017
11.8	22.1	643.1	370.6	272.5	185.6	86.8	0.0	231.5	110.2	121.3	63.7	57.6	0.1	2018
11.5	21.3	680.6	339.3	341.2	243.2	98.0	–	229.8	112.3	117.4	60.5	57.0	0.1	2019
11.3	17.2	761.2	428.8	332.5	205.1	127.3	–	258.5	133.3	125.2	65.6	59.7	0.1	2020
11.3	19.1	835.5	472.5	363.0	247.2	115.9	–	275.7	145.2	130.5	69.5	61.1	0.1	2020 June
11.2	19.0	843.9	489.3	354.7	238.8	115.8	–	270.6	139.4	131.3	72.5	58.8	0.1	July
11.2	19.0	828.9	474.8	354.1	238.8	115.2	–	263.2	134.8	128.3	69.9	58.5	0.1	Aug.
11.4	19.0	832.4	486.5	345.9	226.4	119.6	–	269.6	145.5	124.1	66.0	58.1	0.1	Sep.
11.5	19.0	833.2	487.3	345.9	224.6	121.3	–	269.5	142.6	127.0	68.5	58.4	0.1	Oct.
11.5	19.0	836.8	491.3	345.5	219.0	126.5	–	279.9	154.2	125.8	66.0	59.7	0.1	Nov.
11.3	17.2	761.2	428.8	332.5	205.1	127.3	–	258.5	133.3	125.2	65.6	59.7	0.1	Dec.
11.3	16.5	954.9	507.8	447.0	298.5	148.5	–	279.8	145.0	134.8	69.4	65.3	0.1	2021 Jan.
11.3	16.5	987.8	520.0	467.7	318.0	149.7	–	283.4	145.2	138.3	71.5	66.8	0.1	Feb.
11.3	16.6	991.5	520.2	471.3	319.5	151.8	–	288.9	147.8	141.1	73.7	67.4	0.1	Mar.
11.3	16.5	1,008.7	522.1	486.6	343.1	143.5	–	295.8	150.7	145.0	81.0	64.1	0.1	Apr.
11.3	16.5	1,013.1	513.9	499.2	360.2	139.0	–	304.0	148.4	155.6	88.0	67.6	0.1	May
11.3	16.5	1,016.2	539.5	476.7	335.5	141.3	–	290.8	148.4	142.5	79.9	62.6	0.1	June
11.2	16.0	981.6	525.0	456.6	304.9	151.7	–	292.2	151.7	140.5	79.3	61.2	0.1	July
11.2	16.3	969.4	513.0	456.4	293.0	163.5	0.0	298.4	158.9	139.6	78.8	60.8	0.1	Aug.
11.2	16.3	1,003.9	528.2	475.8	315.7	160.1	–	306.0	164.0	142.0	81.5	60.4	0.1	Sep.
11.2	16.3	1,031.2	550.5	480.7	320.4	160.3	0.0	320.9	169.8	151.1	83.3	67.8	0.1	Oct.
11.3	16.4	1,068.2	565.4	502.8	335.0	167.9	0.0	315.1	171.3	143.8	75.5	68.3	0.1	Nov.
Changes *														
– 0.3	+ 1.5	+ 38.2	+ 51.7	– 13.5	– 7.5	– 6.0	– 0.0	+ 12.6	+ 15.2	– 2.6	+ 2.5	– 5.1	– 0.1	2012
– 1.8	– 7.2	– 174.0	– 75.6	– 98.4	– 83.1	– 15.4	– 0.0	+ 13.5	+ 9.6	+ 3.9	+ 6.9	– 3.0	– 0.2	2013
+ 0.1	– 3.8	+ 76.3	+ 47.8	+ 28.5	+ 39.0	– 10.5	– 0.0	– 43.6	– 8.3	– 35.3	– 30.7	– 4.6	+ 0.2	2014
– 0.6	– 6.1	– 15.4	+ 40.6	– 56.0	– 48.6	– 7.4	– 0.0	– 26.5	– 13.9	– 12.6	+ 0.3	– 13.0	– 0.0	2015
– 0.1	– 1.5	+ 82.7	+ 51.0	+ 31.7	+ 27.0	+ 4.7	– 0.0	+ 3.5	– 3.1	+ 6.7	+ 5.9	+ 0.8	– 0.0	2016
– 1.0	– 4.1	– 15.5	+ 25.2	– 40.8	– 43.2	+ 2.4	± 0.0	+ 31.8	+ 11.0	+ 20.8	+ 15.6	+ 5.2	– 0.4	2017
– 0.2	– 2.2	– 23.9	– 23.4	– 0.4	+ 2.1	– 2.6	– 0.0	– 11.9	– 0.2	– 11.8	– 5.7	– 6.0	– 0.2	2018
– 0.3	– 0.9	– 9.5	– 49.4	+ 39.8	+ 28.0	+ 11.8	– 0.0	– 0.8	+ 2.1	– 2.9	– 1.8	– 1.1	– 0.0	2019
– 0.2	– 3.9	+ 83.8	+ 87.8	– 4.1	– 34.7	+ 30.6	–	+ 23.6	+ 13.8	+ 9.8	+ 7.1	+ 2.8	+ 0.0	2020
– 0.2	+ 0.1	+ 8.8	+ 13.9	– 5.1	– 13.1	+ 8.0	–	– 4.7	– 5.6	+ 0.9	+ 1.8	– 0.9	– 0.0	2020 June
– 0.1	+ 0.0	+ 17.6	+ 20.7	– 3.1	– 4.1	+ 1.0	–	– 2.7	– 4.7	+ 2.0	+ 4.0	– 2.0	+ 0.0	July
+ 0.0	– 0.0	– 13.9	– 13.8	– 0.0	+ 0.5	– 0.5	–	– 7.2	– 4.4	– 2.7	– 2.5	– 0.2	– 0.0	Aug.
+ 0.2	+ 0.0	+ 1.0	+ 10.4	– 9.5	– 13.5	+ 4.0	–	+ 5.8	+ 10.4	– 4.6	– 4.1	– 0.5	+ 0.0	Sep.
+ 0.0	– 0.0	+ 0.1	+ 0.5	– 0.4	– 2.0	+ 1.6	–	– 0.6	– 3.2	+ 2.6	+ 2.3	+ 0.3	+ 0.0	Oct.
+ 0.0	+ 0.0	+ 7.9	+ 5.9	+ 2.0	– 3.7	+ 5.7	–	+ 11.6	+ 12.2	– 0.6	– 2.1	+ 1.5	– 0.0	Nov.
– 0.2	– 1.7	– 72.1	– 60.9	– 11.2	– 12.6	+ 1.4	–	– 20.3	– 20.3	– 0.0	– 0.1	+ 0.1	+ 0.0	Dec.
– 0.0	– 0.8	+ 191.3	+ 78.5	+ 112.9	+ 92.4	+ 20.5	–	+ 20.1	+ 12.3	+ 7.8	+ 3.6	+ 4.2	– 0.0	2021 Jan.
– 0.0	– 0.0	+ 32.7	+ 12.2	+ 20.5	+ 19.3	+ 1.2	–	+ 3.4	+ 0.0	+ 3.4	+ 2.0	+ 1.4	– 0.0	Feb.
+ 0.1	– 0.0	– 1.8	– 2.6	+ 0.8	– 1.1	+ 1.9	–	+ 3.2	+ 1.6	+ 1.6	+ 1.3	+ 0.3	+ 0.0	Mar.
– 0.0	+ 0.0	+ 23.2	+ 4.3	+ 19.0	+ 26.8	– 7.8	–	+ 7.9	+ 3.7	+ 4.2	+ 7.3	– 3.0	+ 0.0	Apr.
+ 0.0	+ 0.0	+ 4.9	– 7.4	+ 12.2	+ 16.6	– 4.4	–	+ 8.6	– 2.2	+ 10.8	+ 7.2	+ 3.5	– 0.0	May
– 0.1	– 0.0	– 1.9	+ 23.7	– 25.6	– 27.4	+ 1.8	–	– 14.8	– 0.6	– 14.2	– 9.0	– 5.2	– 0.0	June
– 0.1	– 0.5	– 34.8	– 14.6	– 20.2	– 30.6	+ 10.4	–	+ 1.3	+ 2.9	– 1.6	– 0.3	– 1.3	+ 0.0	July
+ 0.0	+ 0.2	– 12.8	– 12.3	– 0.5	– 12.2	+ 11.7	+ 0.0	+ 5.7	+ 6.7	– 1.1	– 0.6	– 0.5	– 0.0	Aug.
– 0.0	+ 0.0	+ 30.5	+ 12.9	+ 17.6	+ 21.4	– 3.9	– 0.0	+ 6.7	+ 4.9	+ 1.7	+ 2.3	– 0.6	+ 0.0	Sep.
+ 0.0	+ 0.1	+ 27.9	+ 22.7	+ 5.2	+ 5.1	+ 0.2	+ 0.0	+ 14.7	+ 5.8	+ 9.0	+ 1.6	+ 7.4	– 0.0	Oct.
+ 0.0	+ 0.1	+ 32.3	+ 12.5	+ 19.9	+ 13.0	+ 6.9	–	– 6.7	+ 0.8	– 7.5	– 8.4	+ 0.9	– 0.0	Nov.

IV. Banks

5. Lending by banks (MFIs) in Germany to domestic non-banks (non-MFIs) *

€ billion

Period	Lending to domestic non-banks, total		Short-term lending							Medium- and long-term	
				to enterprises and households			to general government				to enter-
	including negotiable money market paper, securities, equalisation claims	excluding negotiable money market paper, securities, equalisation claims	Total	Total	Loans and bills	Negotiable money market paper	Total	Loans	Treasury bills	Total	Total
	End of year or month *										
2011	3,197.8	2,775.4	383.3	316.5	316.1	0.4	66.8	60.7	6.0	2,814.5	2,321.9
2012	3,220.4	2,786.1	376.1	316.8	316.3	0.5	59.3	57.6	1.7	2,844.3	2,310.9
2013	3,131.6	2,693.2	269.1	217.7	217.0	0.6	51.4	50.8	0.6	2,862.6	2,328.6
2014	3,167.3	2,712.6	257.5	212.7	212.1	0.6	44.8	44.7	0.1	2,909.8	2,376.8
2015	3,233.9	2,764.4	255.5	207.8	207.6	0.2	47.8	47.5	0.2	2,978.3	2,451.4
2016	3,274.3	2,824.2	248.6	205.7	205.4	0.3	42.9	42.8	0.1	3,025.8	2,530.0
2017	3,332.6	2,894.4	241.7	210.9	210.6	0.3	30.7	30.3	0.4	3,090.9	2,640.0
2018	3,394.5	2,990.4	249.5	228.0	227.6	0.4	21.5	21.7	– 0.2	3,145.0	2,732.8
2019	3,521.5	3,119.5	260.4	238.8	238.4	0.4	21.6	18.7	2.9	3,261.1	2,866.9
2020	3,647.0	3,245.3	243.3	221.6	221.2	0.4	21.6	18.0	3.6	3,403.8	3,013.0
2020 June	3,621.1	3,206.8	278.9	248.5	247.6	0.8	30.4	23.3	7.2	3,342.2	2,939.8
July	3,625.7	3,217.4	274.8	243.4	242.6	0.8	31.5	24.2	7.3	3,350.9	2,953.2
Aug.	3,629.7	3,219.7	265.6	237.7	236.9	0.8	28.0	19.4	8.6	3,364.0	2,967.3
Sep.	3,634.2	3,224.6	261.9	232.0	231.3	0.7	29.9	22.3	7.7	3,372.3	2,976.0
Oct.	3,651.1	3,237.8	261.0	229.5	228.7	0.7	31.6	23.3	8.2	3,390.1	2,991.5
Nov.	3,661.1	3,247.6	258.7	229.3	228.7	0.6	29.4	22.4	7.0	3,402.4	3,001.7
Dec.	3,647.0	3,245.3	243.3	221.6	221.2	0.4	21.6	18.0	3.6	3,403.8	3,013.0
2021 Jan.	3,654.0	3,251.0	247.7	221.9	221.3	0.6	25.8	19.7	6.1	3,406.3	3,018.4
Feb.	3,669.3	3,261.9	249.5	224.2	223.6	0.6	25.3	18.5	6.8	3,419.7	3,031.9
Mar.	3,699.1	3,287.7	261.3	236.6	236.0	0.6	24.7	18.6	6.1	3,437.8	3,048.6
Apr.	3,693.9	3,287.7	248.6	223.5	222.8	0.7	25.1	20.2	4.9	3,445.2	3,061.5
May	3,709.6	3,300.4	248.7	225.4	224.6	0.8	23.3	19.5	3.8	3,460.9	3,075.1
June	3,709.2	3,305.8	250.7	225.8	225.0	0.8	24.9	19.9	5.1	3,458.5	3,082.5
July	3,725.3	3,323.0	248.2	221.0	220.2	0.8	27.2	21.9	5.3	3,477.1	3,102.5
Aug.	3,736.4	3,332.9	245.0	221.1	220.4	0.7	23.9	18.9	4.9	3,491.5	3,116.8
Sep.	3,749.8	3,342.1	247.8	224.5	223.8	0.7	23.4	19.6	3.7	3,501.9	3,123.2
Oct.	3,770.2	3,367.1	256.5	232.5	231.9	0.6	24.0	19.5	4.4	3,513.7	3,142.9
Nov.	3,794.4	3,386.5	255.6	232.9	232.3	0.6	22.7	17.7	5.0	3,538.8	3,165.3
	Changes *										
2012	+ 21.0	+ 9.6	– 9.7	– 1.6	– 1.7	+ 0.1	– 8.1	– 3.8	– 4.3	+ 30.7	+ 10.9
2013	+ 4.4	+ 0.1	– 13.8	– 5.8	– 6.3	+ 0.5	– 8.0	– 7.0	– 1.1	+ 18.2	+ 17.6
2014	+ 36.7	+ 20.5	– 11.6	– 4.5	– 4.5	– 0.0	– 7.1	– 6.5	– 0.6	+ 48.3	+ 52.5
2015	+ 68.9	+ 54.1	+ 1.6	– 1.3	– 0.9	– 0.4	+ 2.9	+ 2.8	+ 0.1	+ 67.2	+ 73.9
2016	+ 43.7	+ 62.7	– 5.2	– 0.3	– 0.4	+ 0.1	– 4.9	– 4.8	– 0.2	+ 48.9	+ 79.8
2017	+ 57.0	+ 70.2	– 6.5	+ 5.6	+ 5.6	+ 0.0	– 12.1	– 12.4	+ 0.3	+ 63.5	+ 103.4
2018	+ 71.5	+ 105.3	+ 6.6	+ 15.8	+ 15.7	+ 0.1	– 9.2	– 8.6	– 0.6	+ 65.0	+ 102.0
2019	+ 126.7	+ 129.1	+ 11.7	+ 11.6	+ 11.6	+ 0.0	+ 0.1	– 3.0	+ 3.1	+ 115.0	+ 132.8
2020	+ 123.2	+ 123.6	– 19.6	– 19.8	– 19.8	– 0.0	+ 0.2	– 0.5	+ 0.7	+ 142.8	+ 145.6
2020 June	+ 0.2	+ 2.5	– 6.4	– 5.8	– 5.6	– 0.2	– 0.6	+ 1.3	– 1.9	+ 6.6	+ 7.9
July	+ 4.6	+ 10.5	– 5.9	– 6.9	– 6.8	– 0.1	+ 1.0	+ 0.9	+ 0.1	+ 10.5	+ 15.2
Aug.	+ 4.0	+ 2.4	– 7.5	– 4.1	– 4.1	– 0.0	– 3.5	– 4.9	+ 1.4	+ 11.5	+ 12.6
Sep.	+ 4.6	+ 4.9	– 3.7	– 5.6	– 5.6	– 0.1	+ 2.0	+ 2.9	– 0.9	+ 8.3	+ 8.6
Oct.	+ 16.5	+ 12.9	– 0.9	– 2.6	– 2.6	+ 0.0	+ 1.7	+ 1.1	+ 0.6	+ 17.4	+ 14.6
Nov.	+ 10.6	+ 10.4	– 2.1	– 0.1	+ 0.0	– 0.1	– 2.0	– 0.7	– 1.2	+ 12.7	+ 10.6
Dec.	– 14.1	– 2.3	– 15.5	– 7.7	– 7.5	– 0.2	– 7.8	– 4.4	– 3.4	+ 1.4	+ 11.2
2021 Jan.	+ 6.6	+ 5.3	+ 4.4	+ 0.3	+ 0.1	+ 0.2	+ 4.2	+ 1.7	+ 2.5	+ 2.1	+ 5.2
Feb.	+ 15.3	+ 10.9	+ 1.8	+ 2.3	+ 2.3	+ 0.0	– 0.5	– 1.2	+ 0.7	+ 13.5	+ 13.3
Mar.	+ 29.7	+ 25.6	+ 11.2	+ 12.5	+ 12.5	– 0.0	– 1.3	+ 0.0	– 1.4	+ 18.5	+ 16.3
Apr.	– 5.2	– 0.0	– 12.8	– 13.1	– 13.2	+ 0.1	+ 0.3	+ 1.6	– 1.2	+ 7.5	+ 13.0
May	+ 15.6	+ 12.5	+ 0.1	+ 1.8	+ 1.7	+ 0.1	– 1.8	– 0.6	– 1.2	+ 15.5	+ 13.4
June	– 0.4	+ 5.5	+ 2.0	+ 0.3	+ 0.4	– 0.1	+ 1.7	+ 0.4	+ 1.3	– 2.4	+ 7.3
July	+ 16.1	+ 17.2	– 2.0	– 4.2	– 4.3	+ 0.0	+ 2.3	+ 2.0	+ 0.3	+ 18.1	+ 19.5
Aug.	+ 10.9	+ 9.7	– 3.2	+ 0.1	+ 0.2	– 0.1	– 3.3	– 2.9	– 0.4	+ 14.1	+ 14.2
Sep.	+ 13.5	+ 9.3	+ 3.3	+ 3.7	+ 3.8	– 0.0	– 0.5	+ 0.7	– 1.2	+ 10.2	+ 6.2
Oct.	+ 20.5	+ 25.1	+ 8.7	+ 8.1	+ 8.2	– 0.1	+ 0.5	– 0.2	+ 0.7	+ 11.8	+ 19.8
Nov.	+ 25.9	+ 20.5	+ 1.8	+ 3.0	+ 3.0	+ 0.0	– 1.2	– 1.8	+ 0.6	+ 24.1	+ 19.7

***** See Table IV.2, footnote *; statistical breaks have been eliminated from the changes. The figures for the latest date are always to be regarded as provisional. Subsequent revisions, which appear in the following Monthly Report, are not specially marked.

1 Excluding debt securities arising from the exchange of equalisation claims (see also footnote 2). **2** Including debt securities arising from the exchange of equalisation claims.

IV. Banks

lending												
prises and households					to general government							
Loans						Loans						
Total	Medium-term	Long-term	Securities	Memo item: Fiduciary loans	Total	Total	Medium-term	Long-term	Securities [1]	Equalisation claims [2]	Memo item: Fiduciary loans	Period
End of year or month *												
2,099.5	247.9	1,851.7	222.4	32.7	492.6	299.1	41.1	258.0	193.5	–	3.6	2011
2,119.5	249.7	1,869.8	191.4	31.4	533.4	292.7	39.4	253.3	240.7	–	3.5	2012
2,136.9	248.0	1,888.9	191.7	28.9	534.0	288.4	38.8	249.7	245.6	–	2.7	2013
2,172.7	251.7	1,921.0	204.2	24.4	532.9	283.1	33.5	249.6	249.8	–	2.1	2014
2,232.4	256.0	1,976.3	219.0	18.3	527.0	277.0	27.9	249.0	250.0	–	2.1	2015
2,306.5	264.1	2,042.4	223.4	17.3	495.8	269.4	23.9	245.5	226.4	–	1.8	2016
2,399.5	273.5	2,125.9	240.6	17.4	450.9	254.0	22.5	231.5	196.9	–	1.7	2017
2,499.4	282.6	2,216.8	233.4	16.5	412.1	241.7	19.7	222.0	170.4	–	1.4	2018
2,626.4	301.3	2,325.1	240.5	15.7	394.2	235.9	17.2	218.8	158.2	–	1.5	2019
2,771.8	310.5	2,461.4	241.1	22.4	390.8	234.3	15.7	218.6	156.6	–	1.1	2020
2,701.4	310.8	2,390.6	238.4	19.6	402.4	234.5	17.1	217.4	167.9	–	1.2	2020 June
2,715.7	312.5	2,403.2	237.5	21.0	397.7	234.9	16.7	218.1	162.8	–	1.2	July
2,729.1	313.1	2,416.0	238.2	21.3	396.7	234.4	16.7	217.7	162.3	–	1.2	Aug.
2,737.4	313.1	2,424.2	238.6	21.5	396.3	233.7	16.2	217.5	162.6	–	1.2	Sep.
2,751.8	313.2	2,438.6	239.7	21.6	398.6	234.0	15.9	218.1	164.6	–	1.2	Oct.
2,762.3	311.5	2,450.8	239.4	21.8	400.7	234.2	15.7	218.6	166.4	–	1.2	Nov.
2,771.8	310.5	2,461.4	241.1	22.4	390.8	234.3	15.7	218.6	156.6	–	1.1	Dec.
2,776.4	307.8	2,468.6	242.0	22.5	387.9	233.6	15.3	218.3	154.3	–	1.2	2021 Jan.
2,787.7	309.7	2,478.1	244.2	22.8	387.8	232.0	15.4	216.6	155.8	–	1.1	Feb.
2,802.4	314.5	2,487.9	246.1	23.1	389.3	230.7	15.2	215.5	158.6	–	1.1	Mar.
2,813.9	313.6	2,500.3	247.6	23.4	383.7	230.8	15.0	215.8	153.0	–	1.1	Apr.
2,825.1	311.7	2,513.5	249.9	23.6	385.9	231.1	14.9	216.2	154.8	–	1.1	May
2,831.8	310.0	2,521.8	250.7	23.9	376.0	229.2	14.7	214.5	146.8	–	1.1	June
2,851.4	310.7	2,540.8	251.0	24.0	374.6	229.5	14.9	214.6	145.1	–	1.1	July
2,864.5	311.5	2,553.1	252.2	24.2	374.7	229.1	14.7	214.4	145.6	–	1.1	Aug.
2,870.0	310.1	2,559.9	253.2	24.2	378.7	228.7	14.3	214.4	150.1	–	1.0	Sep.
2,885.5	313.5	2,572.0	257.4	24.1	370.9	230.2	14.6	215.6	140.7	–	1.0	Oct.
2,906.5	315.6	2,590.9	258.8	24.2	373.5	230.1	14.5	215.6	143.5	–	1.0	Nov.
Changes *												
+ 21.6	+ 1.5	+ 20.1	– 10.7	– 1.1	+ 19.8	– 6.6	– 1.9	– 4.7	+ 26.4	–	– 0.2	2012
+ 17.7	– 0.1	+ 17.8	– 0.1	– 2.5	+ 0.6	– 4.3	– 0.7	– 3.6	+ 4.9	–	– 0.8	2013
+ 39.9	+ 5.6	+ 34.3	+ 12.5	– 1.8	– 4.1	– 8.5	– 5.1	– 3.4	+ 4.3	–	– 0.2	2014
+ 59.0	+ 4.5	+ 54.6	+ 14.8	– 2.1	– 6.6	– 6.9	– 4.8	– 2.0	+ 0.2	–	+ 0.0	2015
+ 75.1	+ 9.7	+ 65.4	+ 4.7	– 0.9	– 30.9	– 7.3	– 4.0	– 3.3	– 23.6	–	– 0.4	2016
+ 87.6	+ 9.4	+ 78.2	+ 15.8	+ 0.1	– 39.9	– 10.6	– 1.3	– 9.3	– 29.4	–	– 0.1	2017
+ 108.7	+ 19.3	+ 89.4	– 6.7	– 0.9	– 37.1	– 10.5	– 2.7	– 7.8	– 26.6	–	– 0.0	2018
+ 126.0	+ 18.9	+ 107.2	+ 6.8	– 0.8	– 17.8	– 5.5	– 2.6	– 2.9	– 12.3	–	+ 0.1	2019
+ 145.0	+ 9.4	+ 135.5	+ 0.6	+ 6.1	– 2.8	– 1.1	– 1.5	+ 0.4	– 1.7	–	– 0.4	2020
+ 8.4	+ 0.0	+ 8.4	– 0.5	+ 1.5	– 1.3	– 1.6	– 0.3	– 1.3	+ 0.3	–	– 0.1	2020 June
+ 16.1	+ 1.6	+ 14.5	– 0.9	+ 0.9	– 4.7	+ 0.3	– 0.4	+ 0.7	– 5.1	–	+ 0.0	July
+ 11.9	+ 0.7	+ 11.2	+ 0.7	+ 0.3	– 1.0	– 0.6	– 0.1	– 0.5	– 0.5	–	– 0.0	Aug.
+ 8.2	– 0.0	+ 8.2	+ 0.4	+ 0.1	– 0.4	– 0.7	– 0.4	– 0.3	+ 0.3	–	+ 0.0	Sep.
+ 13.5	+ 0.1	+ 13.5	+ 1.1	+ 0.1	+ 2.8	+ 0.9	– 0.4	+ 1.2	+ 1.9	–	+ 0.0	Oct.
+ 10.9	– 1.2	+ 12.1	– 0.3	+ 0.2	+ 2.1	+ 0.3	– 0.2	+ 0.5	+ 1.8	–	– 0.0	Nov.
+ 9.5	– 1.0	+ 10.5	+ 1.7	+ 0.7	– 9.8	+ 0.0	– 0.0	+ 0.0	– 9.9	–	– 0.1	Dec.
+ 4.3	– 2.7	+ 7.1	+ 0.9	+ 0.1	– 3.1	– 0.8	– 0.4	– 0.5	– 2.3	–	+ 0.1	2021 Jan.
+ 11.1	+ 1.8	+ 9.3	+ 2.1	+ 0.3	+ 0.2	– 1.3	+ 0.1	– 1.4	+ 1.5	–	– 0.0	Feb.
+ 14.4	+ 4.7	+ 9.7	+ 1.9	+ 0.3	+ 2.1	– 1.4	– 0.2	– 1.2	+ 3.5	–	– 0.0	Mar.
+ 11.5	– 0.9	+ 12.4	+ 1.5	+ 0.2	– 5.5	+ 0.1	– 0.2	+ 0.3	– 5.6	–	– 0.0	Apr.
+ 11.0	– 1.9	+ 13.0	+ 2.3	+ 0.2	+ 2.1	+ 0.3	– 0.1	+ 0.4	+ 1.8	–	+ 0.0	May
+ 6.5	– 1.7	+ 8.2	+ 0.8	+ 0.3	– 9.7	– 1.8	– 0.2	– 1.5	– 7.9	–	– 0.0	June
+ 19.2	+ 0.2	+ 19.0	+ 0.3	+ 0.1	– 1.4	+ 0.3	+ 0.2	+ 0.1	– 1.7	–	– 0.0	July
+ 13.0	+ 0.8	+ 12.3	+ 1.2	+ 0.2	– 0.1	– 0.6	– 0.1	– 0.4	+ 0.5	–	– 0.0	Aug.
+ 5.2	– 1.4	+ 6.6	+ 1.0	– 0.0	+ 4.0	– 0.4	– 0.5	+ 0.0	+ 4.4	–	+ 0.0	Sep.
+ 15.6	+ 3.5	+ 12.1	+ 4.1	– 0.1	– 7.9	+ 1.4	+ 0.3	+ 1.1	– 9.4	–	– 0.0	Oct.
+ 18.3	+ 5.6	+ 12.7	+ 1.4	+ 0.1	+ 4.4	+ 0.9	– 0.1	+ 1.1	+ 3.5	–	– 0.0	Nov.

IV. Banks

6. Lending by banks (MFIs) in Germany to domestic enterprises and households, housing loans, sectors of economic activity *

€ billion

Period	Lending to domestic enterprises and households (excluding holdings of negotiable money market paper and excluding securities portfolios) [1]														
		of which:				Lending to enterprises and self-employed persons									
			Housing loans												
	Total	Mortgage loans, total	Total	Mortgage loans secured by residential real estate	Other housing loans	Total	of which: Housing loans	Manufacturing	Electricity, gas and water supply; refuse disposal, mining and quarrying	Construction	Wholesale and retail trade; repair of motor vehicles and motorcycles	Agriculture, forestry, fishing and aquaculture	Transportation and storage; post and telecommunications	Financial intermediation (excluding MFIs) and insurance companies
Lending, total															**End of year or quarter ***
2019	2,864.8	1,512.1	1,470.4	1,213.0	257.4	1,560.5	416.1	146.6	119.0	77.1	141.6	54.2	50.3	168.2
2020 Sep.	2,968.6	1,580.1	1,537.3	1,265.4	272.0	1,616.8	434.6	157.2	121.1	82.2	135.9	55.5	57.7	173.7
Dec.	2,993.0	1,601.8	1,565.6	1,285.1	280.5	1,623.4	443.3	146.7	123.4	82.7	135.8	55.3	59.8	176.0
2021 Mar.	3,038.4	1,618.9	1,587.9	1,302.5	285.4	1,657.2	451.2	149.2	123.0	84.6	139.1	55.4	60.1	182.5
June	3,056.8	1,634.6	1,619.5	1,316.7	302.8	1,654.3	461.4	142.5	122.1	85.7	135.5	56.0	57.9	182.6
Sep.	3,093.7	1,653.1	1,648.9	1,337.4	311.4	1,666.9	467.9	143.9	122.2	87.7	136.7	56.2	56.3	182.6
Short-term lending															
2019	238.4	–	8.1	–	8.1	206.2	4.7	35.9	5.6	15.7	48.6	3.8	4.6	27.0
2020 Sep.	231.3	–	8.5	–	8.5	201.4	5.0	36.9	6.5	16.9	38.4	4.2	5.3	30.0
Dec.	221.2	–	8.0	–	8.0	192.1	4.6	29.0	6.9	16.0	37.0	3.6	6.1	31.6
2021 Mar.	236.0	–	8.0	–	8.0	207.4	4.7	33.4	6.4	16.7	38.9	3.9	6.1	34.2
June	225.0	–	7.8	–	7.8	195.9	4.5	28.8	5.5	16.7	34.7	4.2	4.4	34.4
Sep.	223.8	–	7.8	–	7.8	193.7	4.4	30.4	5.1	17.1	35.6	4.0	4.1	34.1
Medium-term lending															
2019	301.3	–	36.6	–	36.6	219.5	16.6	28.5	4.9	13.9	19.7	4.6	10.2	52.0
2020 Sep.	313.1	–	38.0	–	38.0	232.1	17.9	33.1	5.3	14.6	19.2	4.6	14.3	51.4
Dec.	310.5	–	38.5	–	38.5	230.4	18.5	30.2	5.4	14.8	19.3	4.8	15.0	51.4
2021 Mar.	314.5	–	38.9	–	38.9	236.4	19.1	29.2	5.1	15.3	19.7	4.5	14.7	52.9
June	310.0	–	39.7	–	39.7	232.8	19.8	27.7	5.0	15.3	19.5	4.5	14.1	51.2
Sep.	310.1	–	40.2	–	40.2	233.3	20.2	27.8	5.2	15.8	19.3	4.5	12.3	51.7
Long-term lending															
2019	2,325.1	1,512.1	1,425.7	1,213.0	212.7	1,134.9	394.8	82.2	108.6	47.6	73.3	45.8	35.5	89.2
2020 Sep.	2,424.2	1,580.1	1,490.9	1,265.4	225.5	1,183.3	411.6	87.2	109.3	50.7	78.2	46.7	38.2	92.2
Dec.	2,461.4	1,601.8	1,519.1	1,285.1	234.0	1,201.0	420.2	87.5	111.2	51.8	79.4	47.0	38.7	93.0
2021 Mar.	2,487.9	1,618.9	1,541.0	1,302.5	238.5	1,213.5	427.4	86.6	111.5	52.6	80.5	47.1	39.3	95.4
June	2,521.8	1,634.6	1,572.0	1,316.7	255.3	1,225.5	437.2	86.0	111.6	53.7	81.3	47.3	39.4	97.0
Sep.	2,559.9	1,653.1	1,600.9	1,337.4	263.5	1,240.0	443.4	85.6	111.9	54.9	81.8	47.7	39.9	96.8
Lending, total															**Change during quarter ***
2020 Q3	+ 19.7	+ 21.7	+ 26.5	+ 18.8	+ 7.7	– 1.9	+ 6.4	– 7.4	+ 0.5	+ 1.4	– 2.6	+ 0.1	+ 1.1	– 2.1
Q4	+ 23.9	+ 21.3	+ 27.7	+ 19.3	+ 8.4	+ 6.1	+ 8.4	– 10.3	+ 2.0	+ 0.5	– 0.0	– 0.2	+ 2.2	+ 2.4
2021 Q1	+ 44.8	+ 17.1	+ 22.2	+ 17.3	+ 4.9	+ 33.0	+ 7.6	+ 2.5	– 0.7	+ 1.9	+ 3.2	+ 0.1	+ 0.2	+ 6.2
Q2	+ 17.9	+ 20.9	+ 30.7	+ 21.0	+ 9.7	– 3.2	+ 9.6	– 6.7	– 0.9	+ 1.1	– 3.7	+ 0.6	– 2.2	– 0.0
Q3	+ 37.1	+ 18.5	+ 29.1	+ 19.7	+ 9.4	+ 12.7	+ 6.3	+ 1.4	+ 0.1	+ 2.0	+ 0.5	+ 0.1	– 1.7	+ 1.0
Short-term lending														
2020 Q3	– 16.5	–	+ 0.3	–	+ 0.3	– 16.7	+ 0.3	– 7.6	+ 0.5	– 0.0	– 3.4	– 0.1	– 0.1	– 3.4
Q4	– 10.0	–	– 0.5	–	– 0.5	– 9.3	– 0.4	– 8.0	+ 0.4	– 0.9	– 1.4	– 0.6	+ 0.8	+ 1.6
2021 Q1	+ 14.9	–	+ 0.0	–	+ 0.0	+ 15.4	+ 0.1	+ 4.4	– 0.5	+ 0.7	+ 1.8	+ 0.3	+ 0.1	+ 2.6
Q2	– 11.1	–	– 0.2	–	– 0.2	– 11.6	– 0.2	– 4.6	– 0.9	– 0.1	– 4.2	+ 0.4	– 1.7	+ 0.2
Q3	– 0.3	–	– 0.1	–	– 0.1	– 1.3	– 0.1	+ 1.7	– 0.4	+ 0.4	+ 0.6	– 0.2	– 0.3	– 0.3
Medium-term lending														
2020 Q3	+ 2.3	–	+ 0.2	–	+ 0.2	+ 2.1	+ 0.1	– 0.5	+ 0.0	+ 0.3	– 0.4	+ 0.1	+ 0.9	+ 0.6
Q4	– 2.2	–	+ 0.6	–	+ 0.6	– 1.6	+ 0.6	– 2.8	+ 0.1	+ 0.3	+ 0.1	+ 0.2	+ 0.8	– 0.2
2021 Q1	+ 3.8	–	+ 0.4	–	+ 0.4	+ 5.9	+ 0.6	– 1.0	– 0.2	+ 0.4	+ 0.4	– 0.2	– 0.4	+ 1.5
Q2	– 4.5	–	+ 0.8	–	+ 0.8	– 3.5	+ 0.7	– 1.5	– 0.1	+ 0.0	– 0.3	– 0.1	– 0.6	– 1.8
Q3	– 0.4	–	+ 0.6	–	+ 0.6	– 0.1	+ 0.4	+ 0.1	+ 0.2	+ 0.5	– 0.6	+ 0.0	– 1.8	+ 0.7
Long-term lending														
2020 Q3	+ 33.9	+ 21.7	+ 26.0	+ 18.8	+ 7.2	+ 12.7	+ 6.0	+ 0.7	– 0.0	+ 1.0	+ 1.2	+ 0.1	+ 0.4	+ 0.7
Q4	+ 36.1	+ 21.3	+ 27.7	+ 19.3	+ 8.4	+ 16.9	+ 8.2	+ 0.4	+ 1.6	+ 1.1	+ 1.2	+ 0.3	+ 0.6	+ 1.0
2021 Q1	+ 26.1	+ 17.1	+ 21.8	+ 17.3	+ 4.5	+ 11.7	+ 6.9	– 0.9	+ 0.1	+ 0.7	+ 1.0	+ 0.1	+ 0.5	+ 2.2
Q2	+ 33.6	+ 20.9	+ 30.2	+ 21.0	+ 9.1	+ 12.0	+ 9.1	– 0.7	+ 0.1	+ 1.1	+ 0.7	+ 0.3	+ 0.2	+ 1.5
Q3	+ 37.8	+ 18.5	+ 28.6	+ 19.7	+ 8.9	+ 14.1	+ 6.0	– 0.4	+ 0.3	+ 1.1	+ 0.5	+ 0.2	+ 0.5	+ 0.6

* Excluding lending by foreign branches. Breakdown of lending by building and loan associations by areas and sectors estimated. Statistical breaks have been eliminated from the changes. The figures for the latest date are always to be regarded as provisional; subsequent alterations, which appear in the following Monthly Report, are

IV. Banks

Services sector (including the professions)				Memo items:		Lending to employees and other individuals					Lending to non-profit institutions		Period
	of which:							Other lending					
									of which:				
Total	Housing enterprises	Holding companies	Other real estate activities	Lending to self-employed persons [2]	Lending to craft enterprises	Total	Housing loans	Total	Instalment loans [3]	Debit balances on wage, salary and pension accounts	Total	of which: Housing loans	
End of year or quarter *												**Lending, total**	
803.6	264.5	51.1	193.9	447.5	47.6	1,288.4	1,050.4	238.0	176.5	7.9	15.9	3.9	2019
833.5	281.7	55.1	201.9	458.9	48.1	1,335.9	1,098.8	237.0	178.3	7.5	16.0	3.9	2020 Sep.
843.7	286.6	53.8	204.1	464.0	47.9	1,353.4	1,118.3	235.2	177.4	6.7	16.2	4.0	Dec.
863.3	293.7	59.2	204.3	467.7	48.3	1,364.8	1,132.6	232.2	175.4	6.6	16.4	4.1	2021 Mar.
872.0	296.9	58.2	208.6	473.6	48.7	1,386.3	1,154.0	232.4	174.8	6.6	16.2	4.1	June
881.4	304.0	57.5	210.5	478.3	48.9	1,410.5	1,176.6	233.9	176.4	7.0	16.3	4.3	Sep.
												Short-term lending	
65.0	14.4	9.7	10.2	23.9	4.9	31.6	3.3	28.2	1.3	7.9	0.7	0.0	2019
63.1	15.6	10.7	10.9	21.7	4.3	29.3	3.5	25.8	1.3	7.5	0.6	0.0	2020 Sep.
61.9	15.7	9.6	10.5	20.9	3.7	28.6	3.4	25.2	1.3	6.7	0.6	0.0	Dec.
67.9	16.5	12.3	10.2	20.5	3.9	27.9	3.4	24.6	1.3	6.6	0.7	0.0	2021 Mar.
67.1	16.0	11.5	10.4	21.0	4.1	28.6	3.4	25.2	1.4	6.6	0.5	0.0	June
63.3	16.9	10.3	9.8	20.5	4.3	29.6	3.4	26.2	1.5	7.0	0.5	0.0	Sep.
												Medium-term lending	
85.7	18.1	11.0	22.9	31.9	3.5	81.4	19.9	61.4	58.0	–	0.5	0.0	2019
89.6	20.0	12.6	24.1	31.9	3.6	80.6	20.0	60.6	57.2	–	0.5	0.0	2020 Sep.
89.6	20.4	11.8	24.5	32.0	3.5	79.6	20.0	59.6	56.1	–	0.5	0.0	Dec.
94.9	21.9	14.4	25.2	31.5	3.6	77.6	19.8	57.8	54.2	–	0.5	0.0	2021 Mar.
95.7	22.2	14.4	26.4	31.3	3.4	76.7	19.8	56.9	53.1	–	0.5	0.0	June
96.7	23.2	13.8	27.4	31.1	3.4	76.3	20.0	56.3	52.4	–	0.6	0.1	Sep.
												Long-term lending	
652.9	232.0	30.4	160.9	391.7	39.1	1,175.5	1,027.1	148.3	117.1	–	14.7	3.8	2019
680.8	246.1	31.8	166.9	405.3	40.1	1,226.0	1,075.4	150.7	119.8	–	15.0	3.9	2020 Sep.
692.3	250.5	32.4	169.1	411.1	40.7	1,245.3	1,094.9	150.4	120.0	–	15.1	4.0	Dec.
700.5	255.3	32.5	168.9	415.7	40.8	1,259.3	1,109.5	149.8	119.9	–	15.2	4.1	2021 Mar.
709.2	258.7	32.3	171.8	421.3	41.1	1,281.1	1,130.8	150.3	120.3	–	15.2	4.1	June
721.3	263.9	33.3	173.3	426.7	41.2	1,304.7	1,153.3	151.4	122.6	–	15.3	4.2	Sep.
Change during quarter *												**Lending, total**	
+ 7.0	+ 3.9	– 0.8	+ 3.2	+ 5.4	+ 0.0	+ 21.7	+ 20.0	+ 1.6	+ 1.7	+ 0.1	– 0.1	+ 0.0	2020 Q3
+ 9.6	+ 5.2	– 1.5	+ 1.8	+ 4.4	– 0.2	+ 17.6	+ 19.3	– 1.6	– 0.7	– 0.8	+ 0.2	+ 0.1	Q4
+ 19.6	+ 7.0	+ 5.4	+ 0.3	+ 3.2	+ 0.4	+ 11.6	+ 14.6	– 2.9	– 2.0	– 0.0	+ 0.2	+ 0.1	2021 Q1
+ 8.7	+ 3.2	– 0.9	+ 4.3	+ 5.8	+ 0.4	+ 21.3	+ 21.1	+ 0.2	– 0.4	– 0.1	– 0.2	+ 0.0	Q2
+ 9.4	+ 6.5	– 0.8	+ 1.7	+ 4.2	+ 0.2	+ 24.3	+ 22.7	+ 1.6	+ 1.1	+ 0.5	+ 0.1	+ 0.1	Q3
												Short-term lending	
– 2.6	+ 0.8	– 1.2	– 0.5	– 0.0	– 0.3	+ 0.3	+ 0.1	+ 0.3	– 0.1	+ 0.1	– 0.1	+ 0.0	2020 Q3
– 1.2	+ 0.2	– 1.1	– 0.4	– 0.8	– 0.6	– 0.7	– 0.1	– 0.6	– 0.1	– 0.8	– 0.1	– 0.0	Q4
+ 6.0	+ 0.7	+ 2.7	– 0.3	– 0.4	+ 0.2	– 0.5	– 0.0	– 0.5	– 0.0	– 0.0	+ 0.1	– 0.0	2021 Q1
– 0.8	– 0.5	– 0.8	+ 0.2	+ 0.5	+ 0.2	+ 0.6	+ 0.0	+ 0.6	+ 0.1	– 0.1	– 0.1	+ 0.0	Q2
– 2.7	+ 0.9	– 1.2	– 0.6	– 0.5	+ 0.2	+ 1.0	+ 0.0	+ 1.0	+ 0.1	+ 0.5	– 0.0	+ 0.0	Q3
												Medium-term lending	
+ 1.1	+ 0.4	– 0.0	+ 0.8	+ 0.0	+ 0.1	+ 0.3	+ 0.0	+ 0.2	+ 0.3	–	– 0.1	+ 0.0	2020 Q3
– 0.0	+ 0.4	– 0.9	+ 0.4	+ 0.2	– 0.1	– 0.6	+ 0.0	– 0.7	– 0.7	–	+ 0.0	– 0.0	Q4
+ 5.6	+ 1.5	+ 2.6	+ 0.9	– 0.5	+ 0.1	– 2.2	– 0.3	– 1.9	– 1.9	–	+ 0.0	+ 0.0	2021 Q1
+ 0.8	+ 0.3	– 0.0	+ 1.2	– 0.2	– 0.2	– 0.9	+ 0.1	– 1.0	– 1.1	–	– 0.1	+ 0.0	Q2
+ 0.8	+ 0.8	– 0.5	+ 0.9	– 0.2	– 0.1	– 0.4	+ 0.2	– 0.6	– 0.7	–	+ 0.1	+ 0.0	Q3
												Long-term lending	
+ 8.6	+ 2.8	+ 0.4	+ 3.0	+ 5.4	+ 0.2	+ 21.1	+ 20.0	+ 1.1	+ 1.5	–	+ 0.1	+ 0.0	2020 Q3
+ 10.8	+ 4.6	+ 0.4	+ 1.8	+ 4.9	+ 0.5	+ 19.0	+ 19.3	– 0.4	+ 0.1	–	+ 0.2	+ 0.1	Q4
+ 8.0	+ 4.8	+ 0.1	– 0.2	+ 4.1	+ 0.1	+ 14.3	+ 14.8	– 0.6	– 0.1	–	+ 0.1	+ 0.1	2021 Q1
+ 8.8	+ 3.4	– 0.1	+ 2.9	+ 5.5	+ 0.3	+ 21.6	+ 21.0	+ 0.6	+ 0.6	–	– 0.0	+ 0.0	Q2
+ 11.3	+ 4.7	+ 1.0	+ 1.3	+ 4.9	+ 0.1	+ 23.6	+ 22.5	+ 1.2	+ 1.7	–	+ 0.1	+ 0.1	Q3

not specially marked. **1** Excluding fiduciary loans. **2** Including sole proprietors.
3 Excluding mortgage loans and housing loans, even in the form of instalment credit.

IV. Banks

7. Deposits of domestic non-banks (non-MFIs) at banks (MFIs) in Germany *

€ billion

Period	Deposits, total	Sight deposits	Time deposits [1,2]				Savings deposits [3]	Bank savings bonds [4]	Memo item:		
			Total	for up to and including 1 year	for more than 1 year [2]				Fiduciary loans	Subordinated liabilities (excluding negotiable debt securities)	Liabilities arising from repos
					Total	for up to and including 2 years	for more than 2 years				
	Domestic non-banks, total										**End of year or month ***
2018	3,537.6	2,080.1	841.5	203.4	638.2	56.8	581.4	578.6	37.3	33.9	14.9	0.5
2019	3,661.0	2,236.3	816.2	202.7	613.5	52.7	560.8	575.2	33.2	32.5	14.7	0.2
2020	3,885.2	2,513.0	783.3	188.9	594.4	47.9	546.5	560.6	28.3	34.4	14.4	0.1
2020 Dec.	3,885.2	2,513.0	783.3	188.9	594.4	47.9	546.5	560.6	28.3	34.4	14.4	0.1
2021 Jan.	3,904.5	2,542.0	773.1	181.6	591.5	47.4	544.2	561.6	27.9	34.3	14.3	0.5
Feb.	3,913.7	2,557.5	766.1	174.7	591.4	49.0	542.4	562.6	27.5	34.3	14.4	0.5
Mar.	3,925.8	2,575.2	761.2	175.4	585.9	46.9	539.0	562.3	27.1	34.4	14.4	0.9
Apr.	3,935.7	2,594.6	751.6	168.9	582.7	46.8	535.9	562.8	26.8	34.4	14.4	1.0
May	3,956.3	2,620.5	746.2	165.9	580.3	47.3	533.1	563.2	26.3	34.6	14.4	0.7
June	3,936.4	2,612.1	735.7	158.1	577.5	47.4	530.1	562.6	26.1	34.6	14.4	1.0
July	3,964.6	2,646.0	730.7	155.4	575.3	47.7	527.6	562.0	25.9	34.5	14.3	1.5
Aug.	3,971.0	2,656.0	727.8	151.2	576.7	48.1	528.5	561.5	25.6	34.3	14.3	1.5
Sep.	3,960.3	2,647.9	726.1	152.7	573.5	47.8	525.7	560.7	25.5	34.1	14.4	1.6
Oct.	3,989.1	2,664.3	739.3	163.6	575.7	49.1	526.6	560.1	25.3	33.9	15.3	1.4
Nov.	4,002.7	2,685.9	732.2	157.0	575.2	49.9	525.3	559.9	24.8	33.6	15.3	0.9
											Changes *
2019	+ 122.5	+ 155.8	− 25.7	− 0.8	− 24.9	− 4.1	− 20.7	− 3.4	− 4.1	− 1.4	+ 0.9	− 0.3
2020	+ 221.6	+ 273.7	− 32.7	− 15.0	− 17.7	− 4.8	− 12.9	− 14.5	− 4.9	+ 1.9	− 0.3	− 0.1
2020 Dec.	− 9.2	− 2.3	− 7.6	− 7.5	− 0.1	− 0.2	+ 0.1	+ 1.0	− 0.2	− 0.0	+ 0.1	− 0.6
2021 Jan.	+ 19.2	+ 28.9	− 10.3	− 7.3	− 3.0	− 0.6	− 2.5	+ 1.1	− 0.4	− 0.1	− 0.1	+ 0.4
Feb.	+ 9.1	+ 15.4	− 7.0	− 6.9	− 0.1	+ 1.7	− 1.8	+ 1.0	− 0.4	− 0.0	+ 0.0	− 0.0
Mar.	+ 12.2	+ 17.7	− 4.8	+ 0.7	− 5.5	− 2.2	− 3.4	− 0.3	− 0.4	+ 0.1	+ 0.0	+ 0.4
Apr.	+ 9.8	+ 19.6	− 9.8	− 6.6	− 3.2	− 0.0	− 3.1	+ 0.4	− 0.3	− 0.0	+ 0.0	+ 0.1
May	+ 20.6	+ 26.0	− 5.3	− 3.0	− 2.4	+ 0.4	− 2.8	+ 0.5	− 0.5	+ 0.2	− 0.0	− 0.3
June	− 19.8	− 8.5	− 10.5	− 7.8	− 2.7	+ 0.2	− 2.9	− 0.6	− 0.2	− 0.0	− 0.0	+ 0.2
July	+ 28.2	+ 33.9	− 5.0	− 2.8	− 2.2	+ 0.3	− 2.5	− 0.6	− 0.2	− 0.1	− 0.0	+ 0.6
Aug.	+ 6.4	+ 10.0	− 2.9	− 4.2	+ 1.3	+ 0.4	+ 0.9	− 0.5	− 0.2	− 0.2	−	− 0.0
Sep.	− 6.7	− 5.4	− 0.3	+ 2.1	− 2.4	− 0.6	− 1.8	− 0.8	− 0.2	− 0.2	+ 0.1	+ 0.2
Oct.	+ 28.8	+ 16.4	+ 13.2	+ 11.0	+ 2.2	+ 1.3	+ 0.9	− 0.6	− 0.2	− 0.2	+ 1.0	− 0.2
Nov.	+ 13.7	+ 21.5	− 7.2	− 6.3	− 0.9	+ 0.8	− 1.7	− 0.2	− 0.3	− 0.3	+ 0.0	− 0.6
	Domestic government										**End of year or month ***
2018	218.9	62.7	148.2	67.9	80.3	28.5	51.8	3.7	4.2	25.3	2.2	−
2019	237.1	74.7	154.9	76.0	78.9	26.1	52.8	3.4	4.1	24.7	2.2	0.2
2020	229.5	80.1	143.0	59.6	83.5	20.9	62.6	2.7	3.7	25.4	2.1	−
2020 Dec.	229.5	80.1	143.0	59.6	83.5	20.9	62.6	2.7	3.7	25.4	2.1	−
2021 Jan.	224.1	77.5	140.3	57.8	82.5	20.8	61.7	2.7	3.7	25.3	2.1	−
Feb.	224.4	80.7	137.3	53.6	83.8	22.4	61.3	2.7	3.6	25.3	2.1	−
Mar.	214.4	76.8	131.4	51.2	80.2	19.9	60.3	2.6	3.5	25.3	2.0	−
Apr.	213.7	80.5	127.0	47.8	79.3	19.8	59.5	2.6	3.5	25.4	2.0	−
May	218.4	88.4	123.8	45.8	78.0	19.8	58.2	2.6	3.5	25.3	2.0	−
June	209.0	81.5	121.5	43.8	77.6	20.3	57.3	2.6	3.4	25.2	2.0	0.2
July	211.8	86.6	119.2	41.6	77.7	20.6	57.0	2.6	3.4	25.2	2.0	−
Aug.	207.9	84.1	117.9	38.8	79.0	21.2	57.9	2.6	3.4	25.3	2.0	−
Sep.	210.8	84.8	120.1	42.2	78.0	20.8	57.2	2.5	3.4	25.2	2.0	−
Oct.	213.9	85.2	122.9	43.5	79.5	22.2	57.3	2.5	3.3	25.2	2.0	−
Nov.	213.7	86.1	121.8	41.3	80.6	23.6	57.0	2.5	3.3	25.1	2.0	−
											Changes *
2019	+ 17.1	+ 11.8	+ 5.8	+ 7.8	− 2.0	− 2.6	+ 0.6	− 0.4	− 0.1	− 0.6	− 0.0	+ 0.2
2020	− 6.9	+ 5.7	− 11.6	− 16.5	+ 4.8	− 5.3	+ 10.1	− 0.6	− 0.4	+ 0.7	− 0.1	− 0.2
2020 Dec.	− 7.7	− 3.8	− 3.8	− 4.1	+ 0.4	− 0.5	+ 0.8	− 0.0	− 0.0	− 0.2	+ 0.0	−
2021 Jan.	− 5.5	− 2.6	− 2.8	− 1.8	− 1.0	− 0.1	− 0.9	− 0.0	− 0.0	− 0.2	− 0.0	−
Feb.	+ 0.3	+ 3.3	− 3.0	− 4.2	+ 1.3	+ 1.6	− 0.4	+ 0.0	− 0.0	+ 0.0	+ 0.0	−
Mar.	− 10.0	− 4.0	− 5.9	− 2.3	− 3.6	− 2.5	− 1.0	− 0.1	− 0.1	+ 0.0	− 0.0	−
Apr.	− 0.7	+ 3.7	− 4.4	− 3.5	− 0.9	− 0.1	− 0.8	− 0.0	− 0.0	+ 0.0	−	−
May	+ 4.7	+ 7.9	− 3.2	− 2.0	− 1.3	+ 0.0	− 1.3	+ 0.0	− 0.0	− 0.0	− 0.0	−
June	− 9.3	− 6.9	− 2.3	− 2.0	− 0.4	+ 0.5	− 0.9	− 0.0	− 0.1	− 0.1	− 0.0	+ 0.2
July	+ 2.7	+ 5.0	− 2.2	− 2.2	+ 0.0	+ 0.3	− 0.3	− 0.0	− 0.0	− 0.0	− 0.0	− 0.2
Aug.	− 3.9	− 2.5	− 1.4	− 2.8	+ 1.4	+ 0.5	+ 0.8	+ 0.0	− 0.0	+ 0.0	− 0.0	−
Sep.	+ 4.3	+ 1.8	+ 2.6	+ 3.2	− 0.7	− 0.4	− 0.3	− 0.1	− 0.0	− 0.1	− 0.0	−
Oct.	+ 3.1	+ 0.4	+ 2.9	+ 1.3	+ 1.6	+ 1.4	+ 0.2	− 0.0	− 0.0	+ 0.0	− 0.0	−
Nov.	− 0.2	+ 0.9	− 1.1	− 2.2	+ 1.1	+ 1.4	− 0.4	− 0.0	+ 0.0	− 0.1	+ 0.0	−

***** See Table IV.2, footnote *; statistical breaks have been eliminated from the changes. The figures for the latest date are always to be regarded as provisional. Subsequent revisions, which appear in the following Monthly Report, are not specially marked.

1 Including subordinated liabilities and liabilities arising from registered debt securities. **2** Including deposits under savings and loan contracts (see Table IV.12). **3** Excluding deposits under savings and loan contracts (see also footnote 2).

IV. Banks

7. Deposits of domestic non-banks (non-MFIs) at banks (MFIs) in Germany * (cont´d)

€ billion

Period	Deposits, total	Sight deposits	Time deposits [1,2]					Savings deposits [3]	Bank savings bonds [4]	Memo item:		
			Total	for up to and including 1 year	for more than 1 year [2]					Fiduciary loans	Subordinated liabilities (excluding negotiable debt securities)	Liabilities arising from repos
					Total	for up to and including 2 years	for more than 2 years					
	Domestic enterprises and households											**End of year or month ***
2018	3,318.7	2,017.4	693.3	135.4	557.9	28.3	529.6	574.9	33.1	8.6	12.7	0.5
2019	3,423.9	2,161.6	661.4	126.7	534.7	26.6	508.0	571.8	29.1	7.8	12.6	0.0
2020	3,655.7	2,432.9	640.3	129.3	511.0	27.0	483.9	557.9	24.6	9.0	12.3	0.1
2020 Dec.	3,655.7	2,432.9	640.3	129.3	511.0	27.0	483.9	557.9	24.6	9.0	12.3	0.1
2021 Jan.	3,680.4	2,464.5	632.8	123.8	509.0	26.6	482.5	558.9	24.2	9.0	12.3	0.5
Feb.	3,689.2	2,476.7	628.8	121.1	507.7	26.6	481.1	559.9	23.9	9.0	12.3	0.5
Mar.	3,711.4	2,498.4	629.8	124.1	505.7	27.0	478.7	559.7	23.5	9.1	12.3	0.9
Apr.	3,721.9	2,514.1	624.5	121.1	503.4	27.1	476.4	560.1	23.2	9.0	12.3	1.0
May	3,737.9	2,532.1	622.4	120.1	502.3	27.5	474.9	560.6	22.8	9.2	12.3	0.7
June	3,727.4	2,530.5	614.2	114.3	499.9	27.1	472.8	560.0	22.6	9.3	12.4	0.7
July	3,752.8	2,559.4	611.4	113.8	497.7	27.1	470.6	559.5	22.4	9.3	12.3	1.5
Aug.	3,763.1	2,571.9	610.0	112.3	497.6	27.0	470.7	559.0	22.3	9.1	12.3	1.5
Sep.	3,749.4	2,563.1	606.0	110.5	495.5	27.0	468.5	558.2	22.1	8.9	12.4	1.6
Oct.	3,775.1	2,579.2	616.4	120.2	496.2	27.0	469.3	557.6	22.0	8.7	13.4	1.4
Nov.	3,789.0	2,599.9	610.4	115.8	494.6	26.3	468.3	557.4	21.4	8.5	13.3	0.9
												Changes *
2019	+ 105.4	+ 144.0	− 31.5	− 8.6	− 22.9	− 1.5	− 21.4	− 3.1	− 4.0	− 0.8	+ 1.0	− 0.4
2020	+ 228.5	+ 268.0	− 21.1	+ 1.5	− 22.6	+ 0.5	− 23.0	− 13.9	− 4.6	+ 1.2	− 0.2	+ 0.1
2020 Dec.	− 1.5	+ 1.5	− 3.8	− 3.4	− 0.4	+ 0.3	− 0.7	+ 1.0	− 0.2	+ 0.2	+ 0.1	− 0.6
2021 Jan.	+ 24.6	+ 31.5	− 7.6	− 5.6	− 2.0	− 0.5	− 1.5	+ 1.1	− 0.4	+ 0.1	− 0.1	+ 0.4
Feb.	+ 8.8	+ 12.1	− 4.0	− 2.6	− 1.4	+ 0.0	− 1.4	+ 1.0	− 0.3	− 0.0	− 0.0	− 0.0
Mar.	+ 22.2	+ 21.7	+ 1.0	+ 3.0	− 2.0	+ 0.4	− 2.4	− 0.2	− 0.3	+ 0.0	+ 0.1	+ 0.4
Apr.	+ 10.5	+ 15.8	− 5.4	− 3.2	− 2.2	+ 0.1	− 2.3	+ 0.4	− 0.3	− 0.1	+ 0.0	+ 0.1
May	+ 16.0	+ 18.1	− 2.1	− 1.0	− 1.1	+ 0.4	− 1.5	+ 0.4	− 0.4	+ 0.2	− 0.0	− 0.3
June	− 10.5	− 1.6	− 8.2	− 5.8	− 2.4	− 0.4	− 2.0	− 0.6	− 0.2	+ 0.1	+ 0.0	− 0.0
July	+ 25.4	+ 28.9	− 2.7	− 0.5	− 2.2	+ 0.0	− 2.2	− 0.5	− 0.2	− 0.1	− 0.0	+ 0.8
Aug.	+ 10.3	+ 12.4	− 1.5	− 1.5	− 0.0	− 0.1	+ 0.1	− 0.5	− 0.2	− 0.2	+ 0.0	− 0.0
Sep.	− 11.0	− 7.2	− 2.9	− 1.1	− 1.7	− 0.2	− 1.5	− 0.8	− 0.1	− 0.2	+ 0.1	+ 0.2
Oct.	+ 25.7	+ 16.0	+ 10.3	+ 9.7	+ 0.7	− 0.0	+ 0.7	− 0.6	− 0.2	− 0.2	+ 1.0	− 0.2
Nov.	+ 13.9	+ 20.6	− 6.1	− 4.1	− 2.0	− 0.7	− 1.3	− 0.2	− 0.4	− 0.2	− 0.0	− 0.6
	of which: Domestic enterprises											**End of year or month ***
2018	1,035.4	584.0	432.9	86.0	346.9	17.2	329.7	7.0	11.4	2.8	10.3	0.5
2019	1,031.5	614.4	399.7	81.1	318.6	15.5	303.1	6.7	10.7	2.4	10.1	0.0
2020	1,116.1	719.1	381.7	89.2	292.5	15.0	277.5	5.8	9.4	2.3	9.7	0.1
2020 Dec.	1,116.1	719.1	381.7	89.2	292.5	15.0	277.5	5.8	9.4	2.3	9.7	0.1
2021 Jan.	1,122.7	732.9	374.7	84.2	290.5	14.8	275.7	5.8	9.3	2.3	9.6	0.5
Feb.	1,109.4	723.5	370.9	82.0	288.9	14.9	274.0	5.8	9.1	2.3	9.6	0.5
Mar.	1,134.9	748.2	371.8	85.1	286.7	15.2	271.5	5.8	9.0	2.2	9.6	0.9
Apr.	1,124.8	742.4	367.7	83.4	284.3	15.2	269.2	5.8	8.9	2.2	9.6	1.0
May	1,128.0	746.8	366.7	83.6	283.1	15.7	267.4	5.8	8.7	2.2	9.6	0.7
June	1,115.6	742.7	358.5	77.6	280.9	15.4	265.5	5.8	8.6	2.3	9.6	0.7
July	1,133.9	760.0	359.6	80.7	278.9	15.4	263.6	5.7	8.5	2.3	9.6	1.5
Aug.	1,148.4	775.4	358.9	79.9	279.0	15.3	263.7	5.7	8.5	2.3	9.5	1.5
Sep.	1,141.4	772.1	355.1	78.1	277.0	15.5	261.5	5.7	8.5	2.3	9.6	1.6
Oct.	1,160.1	779.7	366.3	88.4	277.9	15.6	262.3	5.7	8.4	2.3	10.6	1.4
Nov.	1,166.6	791.7	361.4	84.3	277.1	15.4	261.7	5.5	8.0	2.3	10.5	0.9
												Changes *
2019	− 3.4	+ 30.4	− 32.8	− 4.8	− 28.0	− 1.6	− 26.4	− 0.3	− 0.7	− 0.4	+ 0.9	− 0.4
2020	+ 81.0	+ 101.2	− 18.0	+ 7.0	− 25.0	− 0.4	− 24.6	− 0.8	− 1.3	− 0.0	− 0.5	+ 0.1
2020 Dec.	− 15.9	− 10.1	− 5.7	− 3.4	− 2.3	+ 0.2	− 2.5	− 0.1	− 0.0	+ 0.0	+ 0.1	− 0.6
2021 Jan.	+ 6.5	+ 13.8	− 7.0	− 5.0	− 2.1	− 0.2	− 1.9	− 0.0	− 0.1	+ 0.0	− 0.1	+ 0.4
Feb.	− 13.4	− 9.4	− 3.8	− 2.2	− 1.5	+ 0.1	− 1.6	+ 0.0	− 0.2	− 0.1	− 0.0	− 0.0
Mar.	+ 25.6	+ 24.8	+ 0.9	+ 3.1	− 2.2	+ 0.3	− 2.5	+ 0.0	− 0.1	− 0.0	+ 0.0	+ 0.4
Apr.	− 10.0	− 5.7	− 4.2	− 1.8	− 2.4	− 0.0	− 2.4	− 0.0	− 0.1	− 0.0	− 0.0	+ 0.1
May	+ 3.2	+ 4.4	− 1.1	+ 0.2	− 1.3	+ 0.5	− 1.8	+ 0.0	− 0.2	+ 0.0	− 0.0	− 0.3
June	− 12.3	− 4.2	− 8.0	− 6.0	− 2.0	− 0.3	− 1.8	− 0.1	− 0.0	+ 0.1	+ 0.0	− 0.0
July	+ 18.3	+ 17.4	+ 1.1	+ 3.1	− 2.0	− 0.0	− 2.0	− 0.0	− 0.1	− 0.0	− 0.0	+ 0.8
Aug.	+ 14.6	+ 15.4	− 0.8	− 0.8	+ 0.0	− 0.1	+ 0.1	− 0.0	− 0.1	+ 0.0	− 0.0	− 0.0
Sep.	− 5.4	− 2.5	− 2.9	− 1.1	− 1.8	− 0.1	− 1.6	+ 0.0	− 0.0	+ 0.0	+ 0.0	+ 0.2
Oct.	+ 18.7	+ 7.7	+ 11.1	+ 10.2	+ 0.8	+ 0.1	+ 0.7	− 0.1	− 0.0	− 0.0	+ 1.0	− 0.2
Nov.	+ 6.5	+ 11.8	− 4.9	− 3.8	− 1.1	− 0.2	− 0.9	− 0.2	− 0.2	+ 0.0	− 0.0	− 0.6

4 Including liabilities arising from non-negotiable bearer debt securities.

IV. Banks

8. Deposits of domestic households and non-profit institutions at banks (MFIs) in Germany *

€ billion

Period	Deposits of domestic households and non-profit institutions, total	Sight deposits						Time deposits [1,2]					
		Total	by creditor group					Total	by creditor group				
			Domestic households				Domestic non-profit institutions		Domestic households				
			Total	Self-employed persons	Employees	Other individuals			Total	Self-employed persons	Employees	Other individuals	
	End of year or month *												
2018	2,283.4	1,433.5	1,396.1	248.4	991.3	156.4	37.4	260.4	246.7	21.3	188.6	36.7	
2019	2,392.4	1,547.2	1,507.9	266.3	1,081.6	160.1	39.3	261.7	248.3	20.8	190.2	37.3	
2020	2,539.5	1,713.8	1,672.7	291.1	1,215.4	166.2	41.1	258.6	245.1	19.3	190.5	35.2	
2021 June	2,611.8	1,787.9	1,744.7	298.8	1,277.2	168.7	43.2	255.7	242.3	18.7	189.0	34.5	
July	2,618.9	1,799.4	1,755.5	306.6	1,280.3	168.5	44.0	251.8	238.7	18.3	186.4	34.0	
Aug.	2,614.6	1,796.5	1,751.9	310.0	1,275.1	166.8	44.6	251.1	238.1	17.8	186.5	33.8	
Sep.	2,608.1	1,791.1	1,746.6	305.4	1,274.6	166.5	44.5	250.9	238.1	18.1	186.0	34.0	
Oct.	2,615.0	1,799.4	1,755.6	310.2	1,279.3	166.2	43.8	250.1	237.8	18.0	185.8	33.9	
Nov.	2,622.4	1,808.2	1,763.7	310.5	1,287.6	165.6	44.5	248.9	237.1	18.1	185.2	33.8	
	Changes *												
2019	+ 108.8	+ 113.6	+ 111.8	+ 18.5	+ 88.7	+ 4.6	+ 1.8	+ 1.2	+ 1.7	− 0.6	+ 1.6	+ 0.7	
2020	+ 147.5	+ 166.9	+ 165.0	+ 26.0	+ 131.5	+ 7.5	+ 1.8	− 3.1	− 3.2	− 1.5	− 1.6	− 0.2	
2021 June	+ 1.8	+ 2.6	+ 2.6	− 2.1	+ 5.2	− 0.5	− 0.0	− 0.1	− 0.6	− 0.1	− 0.3	− 0.2	
July	+ 7.1	+ 11.5	+ 10.8	+ 7.8	+ 3.2	− 0.2	+ 0.7	− 3.8	− 3.5	− 0.5	− 2.6	− 0.5	
Aug.	− 4.3	− 3.0	− 3.6	+ 3.3	− 5.3	− 1.6	+ 0.7	− 0.7	− 0.6	− 0.4	− 0.1	− 0.1	
Sep.	− 5.6	− 4.7	− 4.6	− 4.5	+ 0.1	− 0.2	− 0.1	+ 0.0	+ 0.1	+ 0.3	− 0.1	− 0.0	
Oct.	+ 7.0	+ 8.4	+ 9.0	+ 4.7	+ 4.6	− 0.3	− 0.7	− 0.7	− 0.4	− 0.1	− 0.2	− 0.1	
Nov.	+ 7.4	+ 8.7	+ 8.0	+ 0.3	+ 8.3	− 0.6	+ 0.7	− 1.2	− 0.7	+ 0.1	− 0.6	− 0.2	

* See Table IV.2, footnote *; statistical breaks have been eliminated from the changes. The figures for the latest date are always to be regarded as provisional. Subsequent revisions, which appear in the following Monthly Report, are not specially marked. 1 Including subordinated liabilities and liabilities arising from

9. Deposits of domestic government at banks (MFIs) in Germany, by creditor group *

€ billion

Period	Deposits												
	Domestic government, total	Federal Government and its special funds [1]						State governments					
		Total	Sight deposits	Time deposits		Savings deposits and bank savings bonds [2]	Memo item: Fiduciary loans	Total	Sight deposits	Time deposits		Savings deposits and bank savings bonds [2]	Memo item: Fiduciary loans
				for up to and including 1 year	for more than 1 year					for up to and including 1 year	for more than 1 year		
	End of year or month *												
2018	218.9	10.5	4.7	1.7	4.1	0.1	12.2	39.0	13.4	11.5	13.0	1.2	13.0
2019	237.1	11.2	5.4	1.5	4.2	0.1	11.6	53.8	21.1	17.1	14.5	1.0	13.1
2020	229.5	48.6	4.8	7.2	36.5	0.0	11.3	46.5	21.2	11.4	13.2	0.7	14.1
2021 June	209.0	45.6	6.3	4.3	35.0	0.0	11.4	43.0	19.8	10.6	12.1	0.6	13.8
July	211.8	44.3	6.2	3.0	35.0	0.0	11.3	48.7	24.8	11.2	12.1	0.6	13.9
Aug.	207.9	44.0	6.2	1.8	36.0	0.0	11.4	42.9	18.9	11.4	12.0	0.6	13.9
Sep.	210.8	45.2	6.4	2.7	36.1	0.0	11.4	49.1	24.1	13.0	11.4	0.6	13.8
Oct.	213.9	45.2	6.3	2.9	36.0	0.0	11.4	49.1	23.6	13.4	11.5	0.6	13.8
Nov.	213.7	45.8	6.7	2.9	36.1	0.1	11.4	47.4	22.3	12.9	11.7	0.6	13.7
	Changes *												
2019	+ 17.1	+ 1.4	+ 0.7	+ 0.2	+ 0.4	+ 0.0	− 0.6	+ 13.8	+ 7.7	+ 5.2	+ 1.1	− 0.2	+ 0.0
2020	− 6.9	+ 37.3	− 0.6	+ 5.7	+ 32.2	− 0.0	− 0.3	− 7.0	+ 0.2	− 5.7	− 1.3	− 0.2	+ 1.0
2021 June	− 9.3	− 1.0	+ 0.1	− 0.8	− 0.3	−	− 0.1	− 2.2	− 2.5	+ 0.2	+ 0.1	− 0.0	− 0.0
July	+ 2.7	− 1.3	− 0.1	− 1.2	− 0.0	−	− 0.1	+ 5.6	+ 5.0	+ 0.6	+ 0.0	− 0.0	+ 0.0
Aug.	− 3.9	− 0.2	+ 0.0	− 1.3	+ 1.0	−	+ 0.0	− 5.8	− 5.9	+ 0.3	− 0.1	− 0.0	+ 0.0
Sep.	+ 4.3	+ 1.2	+ 0.3	+ 0.9	+ 0.0	−	− 0.0	+ 6.2	+ 5.3	+ 1.5	− 0.5	− 0.0	− 0.1
Oct.	+ 3.1	+ 0.0	− 0.1	+ 0.1	− 0.0	−	+ 0.0	− 0.0	− 0.5	+ 0.4	+ 0.1	− 0.0	+ 0.0
Nov.	− 0.2	+ 0.6	+ 0.4	+ 0.0	+ 0.1	+ 0.0	+ 0.0	− 1.8	− 1.3	− 0.6	+ 0.2	− 0.0	− 0.1

* See Table IV.2, footnote *; excluding deposits of the Treuhand agency and its successor organisations, of the Federal Railways, East German Railways and Federal Post Office, and, from 1995, of Deutsche Bahn AG, Deutsche Post AG and Deutsche Telekom AG, and of publicly owned enterprises, which are included in "Enterprises ". Statistical breaks have been eliminated from the changes. The figures for the latest date are always to be regarded as provisional. Subsequent revisions, which appear in

IV. Banks

Savings deposits [3]								Memo item:			
	by maturity										
		more than 1 year [2]									
			of which:								
Domestic non-profit institutions	up to and including 1 year	Total	up to and including 2 years	more than 2 years	Total	Domestic households	Domestic non-profit institutions	Bank savings bonds [4]	Fiduciary loans	Subordinated liabilities (excluding negotiable debt securities) [5]	Liabilities arising from repos	Period
End of year or month *												
13.7	49.4	211.0	11.1	199.9	567.9	560.6	7.2	21.7	5.8	2.4	–	2018
13.3	45.6	216.1	11.2	204.9	565.1	558.1	7.0	18.4	5.4	2.4	–	2019
13.5	40.1	218.5	12.0	206.5	552.0	545.7	6.3	15.1	6.7	2.7	–	2020
13.4	36.7	218.9	11.7	207.2	554.2	547.9	6.3	14.0	7.0	2.8	–	2021 June
13.1	33.1	218.7	11.7	207.0	553.7	547.5	6.2	13.9	7.0	2.8	–	July
13.0	32.4	218.7	11.7	207.0	553.2	547.1	6.2	13.8	6.8	2.8	–	Aug.
12.7	32.4	218.5	11.5	207.0	552.4	546.3	6.2	13.7	6.6	2.8	–	Sep.
12.4	31.8	218.3	11.4	207.0	551.9	545.8	6.2	13.6	6.4	2.8	–	Oct.
11.8	31.4	217.5	10.8	206.7	551.9	545.6	6.3	13.4	6.2	2.8	–	Nov.
Changes *												
– 0.4	– 3.8	+ 5.1	+ 0.1	+ 5.0	– 2.8	– 2.5	– 0.3	– 3.3	– 0.4	+ 0.0	–	2019
+ 0.2	– 5.5	+ 2.4	+ 0.9	+ 1.6	– 13.0	– 12.3	– 0.7	– 3.3	+ 1.3	+ 0.2	–	2020
+ 0.4	+ 0.2	– 0.3	– 0.1	– 0.2	– 0.5	– 0.5	– 0.0	– 0.1	+ 0.0	+ 0.0	–	2021 June
– 0.3	– 3.6	– 0.2	+ 0.0	– 0.3	– 0.5	– 0.4	– 0.1	– 0.1	– 0.1	+ 0.0	–	July
– 0.2	– 0.7	– 0.0	– 0.1	+ 0.0	– 0.5	– 0.5	– 0.0	– 0.1	– 0.2	+ 0.0	–	Aug.
– 0.1	– 0.0	+ 0.0	– 0.1	+ 0.2	– 0.8	– 0.8	– 0.0	– 0.1	– 0.2	+ 0.0	–	Sep.
– 0.4	– 0.6	– 0.2	– 0.1	– 0.0	– 0.5	– 0.5	+ 0.0	– 0.1	– 0.2	+ 0.0	–	Oct.
– 0.5	– 0.3	– 0.9	– 0.5	– 0.3	– 0.0	– 0.1	+ 0.1	– 0.1	– 0.2	+ 0.0	–	Nov.

registered debt securities. **2** Including deposits under savings and loan contracts (see Table IV.12). **3** Excluding deposits under savings and loan contracts (see also footnote 2). **4** Including liabilities arising from non-negotiable bearer debt securities. **5** Included in time deposits.

Local government and local government associations (including municipal special-purpose associations)						Social security funds						
		Time deposits [3]						Time deposits				
Total	Sight deposits	for up to and including 1 year	for more than 1 year	Savings deposits and bank savings bonds [2,4]	Memo item: Fiduciary loans	Total	Sight deposits	for up to and including 1 year	for more than 1 year	Savings deposits and bank savings bonds [2]	Memo item: Fiduciary loans	Period
End of year or month *												
65.4	35.1	9.8	14.9	5.7	0.0	103.9	9.5	45.0	48.4	1.0	–	2018
65.3	37.4	8.6	14.0	5.4	0.0	106.8	10.8	48.8	46.2	1.1	–	2019
68.5	43.2	8.0	12.4	4.9	0.0	66.0	10.9	32.9	21.4	0.8	–	2020
62.5	39.6	6.0	12.2	4.6	0.0	57.9	15.9	22.9	18.3	0.8	–	2021 June
62.0	39.3	5.9	12.2	4.6	0.0	56.8	16.2	21.5	18.4	0.8	–	July
65.5	43.1	5.6	12.2	4.5	0.0	55.5	15.9	20.0	18.8	0.8	–	Aug.
62.2	40.1	5.6	12.0	4.5	0.0	54.3	14.2	20.9	18.5	0.8	–	Sep.
62.3	40.2	5.3	12.3	4.5	0.0	57.4	15.1	21.9	19.6	0.8	–	Oct.
65.8	43.9	5.4	12.1	4.4	0.0	54.7	13.1	20.1	20.6	0.8	–	Nov.
Changes *												
– 0.8	+ 2.1	– 1.4	– 1.2	– 0.3	+ 0.0	+ 2.8	+ 1.3	+ 3.7	– 2.2	+ 0.1	–	2019
+ 3.5	+ 5.9	– 0.6	– 1.3	– 0.5	– 0.0	– 40.8	+ 0.2	– 15.9	– 24.8	– 0.3	–	2020
– 2.6	– 2.1	– 0.5	+ 0.0	– 0.0	–	– 3.5	– 2.4	– 0.9	– 0.1	– 0.0	–	2021 June
– 0.4	– 0.2	– 0.1	+ 0.0	– 0.1	–	– 1.1	+ 0.3	– 1.5	+ 0.0	– 0.0	–	July
+ 3.5	+ 3.8	– 0.3	– 0.0	– 0.0	–	– 1.3	– 0.3	– 1.5	+ 0.5	+ 0.0	–	Aug.
– 2.9	– 2.7	– 0.1	– 0.0	– 0.1	–	– 0.2	– 1.0	+ 1.0	– 0.2	– 0.0	–	Sep.
+ 0.1	+ 0.0	– 0.2	+ 0.3	– 0.0	–	+ 3.0	+ 1.0	+ 0.9	+ 1.2	– 0.0	–	Oct.
+ 3.6	+ 3.7	+ 0.2	– 0.2	– 0.1	–	– 2.6	– 2.0	– 1.7	+ 1.0	+ 0.1	–	Nov.

the following Monthly Report, are not specially marked. **1** Federal Railways Fund, Indemnification Fund, Redemption Fund for Inherited Liabilities, ERP Special Fund, German Unity Fund, Equalisation of Burdens Fund. **2** Including liabilities arising from non-negotiable bearer debt securities. **3** Including deposits under savings and loan contracts. **4** Excluding deposits under savings and loan contracts (see also footnote 3).

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10. Savings deposits and bank savings bonds of banks (MFIs) in Germany sold to non-banks (non-MFIs) *

€ billion

Period	Savings deposits [1]								Memo item: Interest credited on savings deposits	Bank savings bonds, [3] sold to			
		of residents					of non-residents				domestic non-banks		
			at 3 months' notice		at more than 3 months' notice								
	Total	Total	Total	of which: Special savings facilities [2]	Total	of which: Special savings facilities [2]	Total	of which: At 3 months' notice		non-banks, total	Total	of which: With maturities of more than 2 years	foreign non-banks
	End of year or month *												
2018	585.6	578.6	541.1	333.4	37.5	27.2	7.0	6.2	2.3	41.2	37.3	27.9	3.9
2019	581.8	575.2	540.5	313.2	34.7	24.7	6.6	5.9	2.0	35.9	33.2	25.1	2.6
2020	566.8	560.6	533.3	288.0	27.3	18.0	6.3	5.7	1.8	30.2	28.3	22.1	1.9
2021 July	568.1	562.0	536.8	273.0	25.2	16.1	6.1	5.6	0.1	26.0	25.9	20.4	0.2
Aug.	567.6	561.5	536.6	273.1	25.0	15.8	6.0	5.5	0.1	25.8	25.6	20.3	0.2
Sep.	566.7	560.7	536.0	270.2	24.8	15.6	6.0	5.5	0.1	25.6	25.5	20.2	0.1
Oct.	566.1	560.1	535.6	271.8	24.5	15.4	5.9	5.4	0.1	25.4	25.3	20.0	0.1
Nov.	565.8	559.9	535.6	267.9	24.3	15.1	5.9	5.4	0.1	24.9	24.8	19.6	0.2
	Changes *												
2019	− 3.9	− 3.4	− 0.6	− 21.3	− 2.8	− 2.5	− 0.4	− 0.3	.	− 5.3	− 4.1	− 2.8	− 1.2
2020	− 14.8	− 14.5	− 7.2	− 24.6	− 7.3	− 6.7	− 0.3	− 0.2	.	− 5.7	− 4.9	− 3.0	− 0.7
2021 July	− 0.6	− 0.6	− 0.3	− 1.7	− 0.3	− 0.3	− 0.0	− 0.0	.	− 0.2	− 0.2	− 0.2	− 0.0
Aug.	− 0.5	− 0.5	− 0.3	+ 0.1	− 0.2	− 0.3	− 0.1	− 0.0	.	− 0.2	− 0.2	− 0.1	− 0.0
Sep.	− 0.9	− 0.8	− 0.6	− 2.9	− 0.2	− 0.2	− 0.0	− 0.0	.	− 0.2	− 0.2	− 0.1	− 0.0
Oct.	− 0.6	− 0.6	− 0.4	+ 1.6	− 0.2	− 0.2	− 0.0	− 0.0	.	− 0.2	− 0.2	− 0.2	+ 0.0
Nov.	− 0.3	− 0.2	− 0.0	− 3.7	− 0.2	− 0.2	− 0.0	− 0.0	.	− 0.3	− 0.3	− 0.2	+ 0.0

***** See Table IV.2, footnote *; statistical breaks have been eliminated from the changes. The figures for the latest date are always to be regarded as provisional. Subsequent revisions, which appear in the following Monthly Report, are not specially marked. **1** Excluding deposits under savings and loan contracts, which are classified as time deposits. **2** Savings deposits bearing interest at a rate which exceeds the minimum or basic rate of interest. **3** Including liabilities arising from non-negotiable bearer debt securities.

11. Debt securities and money market paper outstanding of banks (MFIs) in Germany *

€ billion

Period	Negotiable bearer debt securities and money market paper										Non-negotiable bearer debt securities and money market paper [6]		Subordinated	
		of which:				with maturities of								
						up to and including 1 year		more than 1 year up to and including 2 years						
	Total	Floating rate bonds [1]	Zero coupon bonds [1,2]	Foreign currency bonds [3,4]	Certificates of deposit	Total	of which: without a nominal guarantee [5]	Total	of which: without a nominal guarantee [5]	more than 2 years	Total	of which: with maturities of more than 2 years	negotiable debt securities	non-negotiable debt securities
	End of year or month *													
2018	1,099.7	139.4	27.5	355.9	88.3	106.2	3.1	22.0	6.1	971.5	0.6	0.1	30.6	0.4
2019	1,140.7	123.5	28.6	367.7	96.7	117.7	2.6	23.6	4.2	999.4	0.9	0.7	31.5	0.4
2020	1,119.0	117.1	12.7	313.6	89.4	94.3	1.5	23.8	3.1	1,000.9	1.1	0.9	34.8	0.4
2021 July	1,145.3	111.6	11.5	318.8	89.5	94.3	2.0	21.4	4.1	1,029.5	1.7	1.0	34.1	0.1
Aug.	1,152.1	110.4	11.9	318.6	95.9	101.6	2.1	20.0	4.2	1,030.5	1.5	1.0	33.9	0.1
Sep.	1,169.7	108.6	12.5	331.6	104.4	110.2	2.1	18.9	4.3	1,040.6	1.2	1.0	34.7	0.1
Oct.	1,178.4	109.2	12.8	330.0	95.2	101.7	2.1	18.0	4.4	1,058.7	0.7	0.6	34.7	0.1
Nov.	1,190.4	109.0	14.3	336.4	103.2	109.8	2.1	18.0	4.4	1,062.6	0.8	0.6	35.3	0.1
	Changes *													
2019	+ 40.6	− 15.9	+ 1.1	+ 11.8	+ 8.4	+ 11.5	− 0.5	+ 1.6	− 1.9	+ 27.4	+ 0.3	+ 0.6	+ 0.8	− 0.3
2020	− 20.5	− 5.2	− 0.8	− 54.1	− 22.3	− 22.2	− 1.1	+ 0.2	− 1.1	+ 1.5	+ 0.3	+ 0.2	+ 2.1	− 0.0
2021 July	− 4.9	+ 0.3	+ 0.2	− 5.3	− 8.2	− 8.1	+ 0.1	+ 0.3	+ 0.2	+ 2.8	− 0.1	+ 0.0	− 0.0	−
Aug.	+ 6.8	− 1.2	+ 0.5	− 0.2	+ 6.5	+ 7.3	+ 0.0	− 1.4	+ 0.1	+ 0.9	− 0.1	+ 0.0	− 0.2	−
Sep.	+ 17.6	− 1.8	+ 0.5	+ 13.0	+ 8.5	+ 8.6	+ 0.0	− 1.1	+ 0.1	+ 10.2	− 0.3	− 0.1	+ 0.8	−
Oct.	+ 8.0	+ 0.5	+ 0.4	− 1.8	− 9.1	− 8.5	+ 0.0	− 1.1	+ 0.1	+ 17.5	+ 0.2	+ 0.2	+ 0.0	−
Nov.	+ 12.0	− 0.2	+ 1.5	+ 6.5	+ 7.9	+ 8.1	+ 0.0	− 0.1	+ 0.0	+ 3.9	+ 0.1	+ 0.0	+ 0.6	−

***** See Table IV.2, footnote *; statistical breaks have been eliminated from the changes. The figures for the latest date are always to be regarded as provisional. Subsequent revisions, which appear in the following Monthly Report, are not specially marked. **1** Including debt securities denominated in foreign currencies. **2** Issue value when floated. **3** Including floating rate notes and zero coupon bonds denominated in foreign currencies. **4** Bonds denominated in non-euro area currencies. **5** Negotiable bearer debt securities and money market paper with a nominal guarantee of less than 100%. **6** Non-negotiable bearer debt securities are classified among bank savings bonds (see also Table IV.10, footnote 2).

IV. Banks

12. Building and loan associations (MFIs) in Germany * Interim statements

€ billion

End of year/month	Number of associations	Balance sheet total [1]	Lending to banks (MFIs)			Lending to non-banks (non-MFIs)				Deposits of banks (MFIs) [6]		Deposits of non-banks (non-MFIs)		Bearer debt securities outstanding	Capital (including published reserves) [8]	Memo item: New contracts entered into in year or month [9]
			Credit balances and loans (excluding building loans) [2]	Building loans [3]	Bank debt securities [4]	Building loans			Securities (including Treasury bills and Treasury discount paper) [5]	Deposits under savings and loan contracts	Sight and time deposits	Deposits under savings and loan contracts	Sight and time deposits [7]			
						Loans under savings and loan contracts	Interim and bridging loans	Other building loans								
All building and loan associations																
2020	18	244.9	31.9	0.0	16.1	10.8	125.1	31.7	25.5	2.9	26.7	181.4	8.4	2.8	12.3	76.5
2021 Sep.	18	250.1	30.2	0.0	15.7	10.3	128.9	35.6	25.6	2.9	28.6	183.1	8.9	3.3	12.4	5.5
Oct.	18	250.6	29.1	0.0	15.6	10.2	129.4	36.0	26.6	2.9	28.1	183.2	8.9	4.3	12.4	5.2
Nov.	18	252.1	30.0	0.0	15.7	10.2	129.8	36.4	26.5	2.9	29.7	182.9	9.1	4.3	12.4	5.3
Private building and loan associations																
2021 Sep.	10	174.9	15.2	–	6.9	7.5	100.6	30.4	11.5	1.7	26.2	119.0	8.6	3.3	8.5	3.3
Oct.	10	175.3	14.2	–	6.8	7.5	101.0	30.7	12.4	1.7	25.6	119.0	8.5	4.3	8.5	3.1
Nov.	10	176.8	15.0	–	6.9	7.4	101.2	31.0	12.5	1.7	27.1	119.1	8.7	4.3	8.5	3.2
Public building and loan associations																
2021 Sep.	8	75.2	15.0	0.0	8.8	2.7	28.3	5.2	14.2	1.2	2.4	64.1	0.3	–	3.9	2.1
Oct.	8	75.3	15.0	0.0	8.8	2.7	28.4	5.3	14.2	1.2	2.5	64.1	0.4	–	3.9	2.1
Nov.	8	75.3	15.0	0.0	8.8	2.7	28.5	5.4	14.0	1.2	2.6	63.9	0.5	–	3.9	2.1

Trends in building and loan association business

€ billion

Period	Changes in deposits under savings and loan contracts			Capital promised		Capital disbursed						Disbursement commitments outstanding at end of period		Interest and repayments received on building loans [11]		
							Allocations									
							Deposits under savings and loan contracts		Loans under savings and loan contracts [10]		Newly granted interim and bridging loans and other building loans					
	Amounts paid into savings and loan accounts [10]	Interest credited on deposits under savings and loan contracts	Repayments of deposits under cancelled savings and loan contracts	Total	of which: Net allocations [12]	Total	Total	of which: Applied to settlement of interim and bridging loans	Total	of which: Applied to settlement of interim and bridging loans		Total	of which: Allocated contracts	Total	of which: Repayments during quarter	Memo item: Housing bonuses received [13]
All building and loan associations																
2020	26.6	2.1	8.2	53.8	29.0	48.0	18.8	4.2	4.4	3.5	24.8	18.3	6.3	6.7	5.2	0.2
2021 Sep.	2.3	0.0	0.8	4.0	2.1	3.8	1.3	0.4	0.4	0.3	2.0	18.9	6.4	0.5	1.2	0.0
Oct.	2.2	0.0	0.8	4.2	2.1	3.7	1.3	0.3	0.3	0.3	2.0	19.1	6.3	0.5	.	0.0
Nov.	2.3	0.1	1.0	4.6	2.4	4.2	1.6	0.3	0.3	0.3	2.3	19.0	6.4	0.5	.	0.0
Private building and loan associations																
2021 Sep.	1.5	0.0	0.4	2.9	1.5	2.9	1.0	0.3	0.3	0.2	1.6	14.1	3.4	0.4	0.9	0.0
Oct.	1.4	0.0	0.4	3.0	1.4	2.8	0.9	0.2	0.2	0.2	1.6	14.2	3.4	0.4	.	0.0
Nov.	1.5	0.0	0.4	3.3	1.6	3.2	1.1	0.2	0.2	0.2	1.8	14.0	3.5	0.4	.	0.0
Public building and loan associations																
2021 Sep.	0.8	0.0	0.4	1.1	0.7	0.9	0.4	0.1	0.1	0.1	0.4	4.8	2.9	0.1	0.3	0.0
Oct.	0.8	0.0	0.4	1.2	0.7	0.9	0.4	0.1	0.1	0.1	0.4	4.9	2.9	0.1	.	0.0
Nov.	0.8	0.0	0.6	1.3	0.8	1.0	0.5	0.1	0.1	0.1	0.4	4.9	2.9	0.1	.	0.0

***** Excluding assets and liabilities and/or transactions of foreign branches. The figures for the latest date are always to be regarded as provisional. Subsequent revisions, which appear in the following Monthly Report, are not specially marked. **1** See Table IV.2, footnote 1. **2** Including claims on building and loan associations, claims arising from registered debt securities and central bank credit balances. **3** Loans under savings and loan contracts and interim and bridging loans. **4** Including money market paper and small amounts of other securities issued by banks. **5** Including equalisation claims. **6** Including liabilities to building and loan associations. **7** Including small amounts of savings deposits. **8** Including participation rights capital and fund for general banking risks. **9** Total amount covered by the contracts; only contracts newly entered into, for which the contract fee has been fully paid. Increases in the sum contracted count as new contracts. **10** For disbursements of deposits under savings and loan contracts arising from the allocation of contracts see "Capital disbursed". **11** Including housing bonuses credited. **12** Only allocations accepted by the beneficiaries; including allocations applied to settlement of interim and bridging loans. **13** The amounts already credited to the accounts of savers or borrowers are also included in "Amounts paid into savings and loan accounts" and "Interest and repayments received on building loans".

IV. Banks

13. Assets and liabilities of the foreign branches and foreign subsidiaries of German banks (MFIs) *

€ billion

Period	Number of: German banks (MFIs) with foreign branches and/or foreign subsidiaries	Number of: foreign branches [1] and/or foreign subsidiaries	Balance sheet total [7]	Lending to banks (MFIs): Total	Lending to banks (MFIs): Credit balances and loans: Total	Lending to banks (MFIs): Credit balances and loans: German banks	Lending to banks (MFIs): Credit balances and loans: Foreign banks	Lending to banks (MFIs): Money market paper, securities [2,3]	Lending to non-banks (non-MFIs): Total	Lending to non-banks (non-MFIs): Loans: Total	Lending to non-banks (non-MFIs): Loans: to German non-banks	Lending to non-banks (non-MFIs): Loans: to foreign non-banks	Lending to non-banks (non-MFIs): Money market paper, securities [2]	Other assets [7]: Total	Other assets [7]: of which: Derivative financial instruments in the trading portfolio
Foreign branches															**End of year or month ***
2018	49	183	1,401.2	403.8	392.8	192.1	200.7	11.0	516.8	427.7	20.0	407.7	89.1	480.5	309.0
2019	52	198	1,453.0	407.3	389.2	216.0	173.2	18.1	534.3	436.1	19.7	416.4	98.2	511.5	361.7
2020	50	206	1,552.2	376.7	364.0	213.2	150.8	12.7	504.8	409.6	14.3	395.3	95.2	670.7	523.6
2021 Jan.	49	205	1,524.5	414.2	401.5	247.6	153.8	12.7	502.1	408.7	13.9	394.8	93.4	608.3	473.6
Feb.	49	203	1,487.0	429.1	416.7	258.4	158.3	12.4	492.2	402.6	13.6	389.1	89.6	565.6	431.8
Mar.	49	203	1,492.8	417.4	404.9	238.9	166.0	12.5	492.9	403.9	13.3	390.6	89.0	582.5	430.8
Apr.	49	202	1,478.2	432.8	420.7	266.5	154.2	12.1	488.7	401.7	13.3	388.3	87.0	556.7	413.3
May	49	203	1,476.1	430.6	417.9	257.9	160.0	12.6	493.8	405.2	13.1	392.2	88.6	551.7	415.5
June	49	203	1,475.7	421.2	407.8	242.9	164.9	13.4	492.9	407.5	13.0	394.5	85.5	561.6	417.1
July	50	204	1,524.4	444.9	431.0	266.8	164.2	13.8	494.0	410.8	13.2	397.6	83.2	585.5	436.6
Aug.	50	204	1,537.2	448.2	434.3	273.1	161.2	13.9	489.2	407.3	13.2	394.1	81.9	599.8	437.4
Sep.	50	205	1,518.6	452.9	439.1	279.3	159.8	13.8	485.2	404.4	13.1	391.3	80.8	580.5	415.3
Oct.	52	207	1,552.0	495.3	481.3	310.3	171.0	13.9	497.7	417.4	13.3	404.1	80.3	559.0	402.4
															Changes *
2019	+ 3	+ 15	+ 51.5	− 4.7	− 7.7	+ 23.9	− 31.6	+ 2.9	+ 12.6	+ 0.9	− 0.3	+ 1.2	+ 11.7	+ 30.6	+ 49.6
2020	− 2	+ 9	+ 104.2	− 20.3	− 15.5	− 2.8	− 12.7	− 4.8	+ 0.2	− 1.0	− 5.4	+ 4.4	+ 1.2	+ 164.2	+ 179.6
2021 Feb.	−	− 2	− 37.6	+ 14.7	+ 15.0	+ 10.8	+ 4.2	− 0.3	− 10.7	− 6.8	− 0.4	− 6.4	− 3.9	− 42.7	− 42.1
Mar.	−	−	+ 4.5	− 14.7	− 14.6	− 19.5	+ 4.9	− 0.1	− 7.5	− 5.7	− 0.3	− 5.5	− 1.8	+ 15.6	− 4.7
Apr.	−	− 1	− 13.3	+ 18.2	+ 18.4	+ 27.6	− 9.2	− 0.2	+ 3.2	+ 4.0	+ 0.0	+ 4.0	− 0.9	− 24.5	− 14.4
May	−	+ 1	− 1.6	− 2.8	− 3.3	− 9.8	+ 6.5	+ 0.5	+ 7.0	+ 5.0	− 0.3	+ 5.3	+ 1.9	− 3.4	+ 3.1
June	−	−	− 1.6	− 11.5	− 12.2	− 15.0	+ 2.8	+ 0.7	− 7.0	− 2.9	− 0.1	− 2.8	− 4.1	+ 8.6	− 1.1
July	+ 1	+ 1	+ 48.7	+ 23.4	+ 23.0	+ 24.0	− 0.9	+ 0.4	+ 0.7	+ 3.1	+ 0.2	+ 2.9	− 2.4	+ 24.0	+ 19.5
Aug.	−	−	+ 12.6	+ 3.1	+ 3.0	+ 6.3	− 3.2	+ 0.0	− 5.5	− 4.1	+ 0.0	− 4.1	− 1.4	+ 14.1	+ 0.3
Sep.	−	+ 1	− 19.8	+ 2.9	+ 3.1	+ 6.1	− 3.1	− 0.1	− 8.8	− 7.0	− 0.1	− 6.9	− 1.8	− 20.4	− 24.3
Oct.	+ 2	+ 2	+ 33.7	+ 42.6	+ 42.5	+ 31.0	+ 11.5	+ 0.1	+ 13.0	+ 13.4	+ 0.2	+ 13.2	− 0.3	− 21.2	− 12.6
Foreign subsidiaries															**End of year or month ***
2018	17	43	237.2	51.2	45.4	20.1	25.3	5.8	136.4	111.7	13.8	97.8	24.7	49.6	0.0
2019	15	41	235.2	52.5	46.7	18.3	28.4	5.7	139.0	116.1	14.4	101.7	22.9	43.7	0.0
2020	12	36	229.5	44.8	39.9	17.4	22.5	4.9	139.7	114.4	13.1	101.4	25.3	44.9	0.0
2021 Jan.	12	36	228.9	43.9	39.1	16.9	22.2	4.8	139.0	114.0	12.6	101.4	25.0	46.1	0.0
Feb.	12	36	231.6	42.2	37.2	19.0	18.3	5.0	137.9	113.4	12.7	100.7	24.5	51.5	0.0
Mar.	12	36	228.7	43.3	38.4	19.0	19.4	4.9	137.7	113.1	12.7	100.4	24.5	47.7	0.0
Apr.	12	36	230.8	42.7	37.4	19.0	18.4	5.3	136.5	112.7	12.6	100.1	23.8	51.6	0.0
May	12	36	230.8	41.9	37.0	18.5	18.5	4.9	136.8	112.7	12.3	100.4	24.2	52.2	0.0
June	12	36	235.5	43.6	38.9	19.9	19.0	4.7	136.8	112.5	12.0	100.4	24.3	55.1	0.0
July	12	35	236.5	44.7	39.6	20.1	19.5	5.1	136.4	112.6	12.0	100.6	23.8	55.4	0.0
Aug.	12	35	236.6	44.0	39.1	18.9	20.2	5.0	137.7	113.5	12.1	101.5	24.2	54.8	0.0
Sep.	13	36	244.6	51.9	47.1	21.9	25.2	4.8	138.5	114.5	12.2	102.3	24.0	54.1	0.0
Oct.	12	35	246.1	50.9	45.9	24.3	21.6	5.0	138.5	115.4	12.5	102.9	23.1	56.6	0.0
															Changes *
2019	− 2	− 2	− 7.2	+ 0.4	+ 0.5	− 1.8	+ 2.3	− 0.2	+ 1.6	+ 3.5	+ 0.5	+ 3.0	− 1.9	− 9.1	± 0.0
2020	− 3	− 5	− 0.8	− 5.3	− 5.0	− 1.0	− 4.0	− 0.3	+ 3.3	+ 0.8	− 1.3	+ 2.1	+ 2.4	+ 1.2	± 0.0
2021 Feb.	−	−	+ 2.7	− 1.6	− 1.8	+ 2.1	− 3.9	+ 0.2	− 1.1	− 0.6	+ 0.1	− 0.7	− 0.5	+ 5.4	± 0.0
Mar.	−	−	− 4.5	+ 0.3	+ 0.5	+ 0.0	+ 0.5	− 0.2	− 1.1	− 1.1	+ 0.0	− 1.1	+ 0.0	− 3.8	± 0.0
Apr.	−	−	+ 3.5	+ 0.0	− 0.5	− 0.0	− 0.5	+ 0.5	− 0.4	+ 0.3	− 0.1	+ 0.5	− 0.7	+ 3.9	± 0.0
May	−	−	+ 0.4	− 0.6	− 0.2	− 0.5	+ 0.3	− 0.4	+ 0.5	+ 0.1	− 0.3	+ 0.4	+ 0.4	+ 0.5	± 0.0
June	−	−	+ 3.5	+ 1.1	+ 1.4	+ 1.4	+ 0.1	− 0.3	− 0.6	− 0.8	− 0.3	− 0.5	+ 0.2	+ 2.9	± 0.0
July	−	− 1	+ 0.8	+ 1.1	+ 0.7	+ 0.2	+ 0.4	+ 0.4	− 0.5	+ 0.1	− 0.0	+ 0.1	− 0.6	+ 0.3	± 0.0
Aug.	−	−	− 0.0	− 0.7	− 0.6	− 1.3	+ 0.7	− 0.1	+ 1.2	+ 0.8	+ 0.0	+ 0.8	+ 0.4	− 0.5	± 0.0
Sep.	+ 1	+ 1	+ 7.0	+ 7.3	+ 7.6	+ 3.0	+ 4.6	− 0.3	+ 0.4	+ 0.5	+ 0.1	+ 0.4	− 0.2	− 0.7	± 0.0
Oct.	− 1	− 1	+ 1.5	− 0.9	− 1.1	+ 2.4	− 3.6	+ 0.2	− 0.0	+ 0.9	+ 0.3	+ 0.5	− 0.9	+ 2.5	± 0.0

***** In this table "foreign" also includes the country of domicile of the foreign branches and foreign subsidiaries. Statistical breaks have been eliminated from the changes. (Breaks owing to changes in the reporting population have not been eliminated from the flow figures for the foreign subsidiaries.) The figures for the latest date are always to be regarded as provisional; subsequent revisions, which appear in the following Monthly Report, are not specially marked. **1** Several branches in a given country of

IV. Banks

Deposits									Money market paper and debt securities outstanding [5]	Working capital and own funds	Other liabilities [6,7]		Period
	of banks (MFIs)			of non-banks (non-MFIs)									
					German non-banks [4]								
Total	Total	German banks	Foreign banks	Total	Total	Shortterm	Medium and longterm	Foreign non-banks			Total	of which: Derivative financial instruments in the trading portfolio	
End of year or month *												**Foreign branches**	
897.1	607.2	428.8	178.4	290.0	11.4	9.7	1.8	278.5	91.2	54.0	358.9	302.6	2018
894.1	613.6	453.2	160.4	280.5	12.7	10.1	2.7	267.8	94.6	53.4	410.9	361.1	2019
872.2	588.5	431.8	156.7	283.7	11.7	10.2	1.5	272.0	61.5	49.9	568.6	523.1	2020
898.0	596.5	421.1	175.5	301.5	10.4	8.9	1.5	291.1	71.0	50.2	505.3	472.3	2021 Jan.
906.9	600.1	421.4	178.6	306.8	9.9	8.4	1.5	296.9	68.0	50.1	462.1	430.8	Feb.
907.4	606.9	435.0	172.0	300.4	9.5	8.0	1.5	290.9	72.1	50.7	462.7	429.7	Mar.
911.4	612.3	438.3	174.0	299.1	9.0	7.5	1.5	290.1	73.1	50.3	443.4	412.2	Apr.
907.0	604.3	431.2	173.1	302.7	8.6	7.1	1.5	294.0	74.9	50.2	444.0	414.5	May
904.8	607.4	438.0	169.4	297.4	8.3	6.8	1.5	289.0	72.1	51.0	447.9	415.9	June
930.2	622.8	444.9	177.9	307.3	8.7	7.2	1.5	298.7	74.7	51.2	468.4	435.5	July
932.9	624.6	438.7	185.9	308.3	8.5	7.0	1.5	299.8	81.6	51.3	471.3	436.0	Aug.
937.3	618.3	432.9	185.4	319.0	9.6	7.8	1.8	309.4	81.1	51.6	448.6	414.2	Sep.
982.8	654.6	469.2	185.4	328.2	9.0	7.2	1.8	319.2	83.7	51.7	433.8	401.3	Oct.
Changes *													
− 7.2	+ 2.4	+ 24.4	− 22.0	− 9.6	+ 1.3	+ 0.4	+ 0.9	− 10.9	+ 3.0	− 0.6	+ 52.0	+ 58.5	2019
− 9.2	− 13.3	− 21.4	+ 8.1	+ 4.1	− 1.0	+ 0.3	− 1.4	+ 5.1	− 28.1	− 3.5	+ 157.6	+ 162.0	2020
+ 8.9	+ 3.6	+ 0.7	+ 2.9	+ 5.3	− 0.5	− 0.5	− 0.0	+ 5.8	− 3.1	− 0.1	− 43.5	− 41.5	2021 Feb.
− 2.5	+ 4.2	+ 14.4	− 10.2	− 6.7	− 0.4	− 0.4	+ 0.0	− 6.3	+ 2.8	+ 0.6	− 0.3	− 1.1	Mar.
+ 6.2	+ 7.3	+ 2.2	+ 5.1	− 1.1	− 0.6	− 0.5	− 0.0	− 0.5	+ 2.3	− 0.4	− 18.1	− 17.5	Apr.
− 3.4	− 7.0	− 7.1	+ 0.1	+ 3.6	− 0.3	− 0.3	− 0.0	+ 4.0	+ 2.3	− 0.1	+ 0.5	+ 2.3	May
− 5.2	+ 0.3	+ 6.7	− 6.5	− 5.5	− 0.3	− 0.3	+ 0.0	− 5.2	− 4.1	+ 0.8	+ 3.9	+ 1.4	June
+ 25.3	+ 15.3	+ 6.9	+ 8.3	+ 10.0	+ 0.3	+ 0.3	− 0.0	+ 9.7	+ 2.6	+ 0.2	+ 20.5	+ 19.5	July
+ 2.3	+ 1.4	− 6.2	+ 7.5	+ 0.9	− 0.2	− 0.2	−	+ 1.1	+ 6.6	+ 0.2	+ 3.0	+ 0.6	Aug.
+ 1.8	− 8.7	− 5.8	− 2.9	+ 10.5	+ 1.1	+ 0.8	+ 0.3	+ 9.4	− 1.6	+ 0.3	− 22.9	− 21.8	Sep.
+ 46.0	+ 36.8	+ 36.3	+ 0.5	+ 9.2	− 0.6	− 0.6	− 0.0	+ 9.8	+ 2.9	+ 0.1	− 14.8	− 12.9	Oct.
End of year or month *												**Foreign subsidiaries**	
171.5	71.6	36.1	35.5	100.0	9.1	6.4	2.7	90.8	14.3	22.4	29.0	0.0	2018
165.7	68.7	36.6	32.1	97.0	6.6	3.9	2.7	90.4	16.0	22.1	31.4	0.0	2019
163.4	59.6	34.1	25.5	103.8	6.7	4.2	2.5	97.1	16.6	20.3	29.2	0.0	2020
163.1	58.1	32.7	25.4	105.0	6.7	4.3	2.5	98.3	16.8	20.4	28.6	0.0	2021 Jan.
166.8	60.2	34.8	25.4	106.5	6.4	3.9	2.5	100.1	16.6	20.3	27.9	0.0	Feb.
164.5	59.2	34.3	25.0	105.2	6.4	4.0	2.5	98.8	16.9	20.4	27.0	0.0	Mar.
166.1	59.0	33.4	25.7	107.0	6.4	4.0	2.5	100.6	17.3	20.4	27.0	0.0	Apr.
165.8	57.0	32.1	24.9	108.9	6.5	4.0	2.4	102.4	17.3	20.4	27.3	0.0	May
167.8	58.5	32.2	26.3	109.3	6.6	4.2	2.4	102.7	17.6	20.5	29.6	0.0	June
169.7	58.6	32.4	26.3	111.1	6.6	4.2	2.4	104.5	17.7	20.5	28.6	0.0	July
169.8	58.2	31.1	27.1	111.6	6.6	4.2	2.4	105.0	17.5	20.8	28.6	0.0	Aug.
175.4	61.5	30.0	31.5	113.9	6.6	4.2	2.4	107.3	18.4	20.7	30.0	0.0	Sep.
177.6	63.8	32.8	31.0	113.8	6.9	4.5	2.4	106.9	17.9	20.4	30.1	0.0	Oct.
Changes *													
− 6.7	− 3.2	+ 0.5	− 3.8	− 3.5	− 2.5	− 2.5	+ 0.0	− 1.0	+ 1.7	− 0.4	− 1.8	± 0.0	2019
+ 1.4	− 7.3	− 2.5	− 4.8	+ 8.7	+ 0.0	+ 0.3	− 0.3	+ 8.7	+ 0.6	− 1.8	− 1.0	± 0.0	2020
+ 3.6	+ 2.1	+ 2.2	− 0.0	+ 1.5	− 0.3	− 0.3	− 0.0	+ 1.8	− 0.3	− 0.0	− 0.7	± 0.0	2021 Feb.
− 3.5	− 1.5	− 0.6	− 1.0	− 1.9	+ 0.0	+ 0.0	− 0.0	− 2.0	+ 0.3	+ 0.0	− 1.4	± 0.0	Mar.
+ 2.6	+ 0.3	− 0.9	+ 1.2	+ 2.3	− 0.0	− 0.0	− 0.0	+ 2.3	+ 0.4	+ 0.0	+ 0.5	± 0.0	Apr.
+ 0.0	− 1.9	− 1.3	− 0.6	+ 2.0	+ 0.1	+ 0.1	− 0.0	+ 1.9	+ 0.0	+ 0.0	+ 0.4	± 0.0	May
+ 1.2	+ 1.2	+ 0.1	+ 1.0	− 0.0	+ 0.1	+ 0.1	− 0.0	− 0.1	+ 0.3	+ 0.1	+ 1.9	± 0.0	June
+ 1.8	+ 0.1	+ 0.2	− 0.1	+ 1.7	+ 0.0	+ 0.0	− 0.0	+ 1.7	+ 0.1	− 0.1	− 1.1	± 0.0	July
− 0.1	− 0.5	− 1.3	+ 0.8	+ 0.5	+ 0.0	+ 0.0	+ 0.0	+ 0.4	− 0.2	+ 0.3	− 0.1	± 0.0	Aug.
+ 4.9	+ 3.0	− 1.0	+ 4.0	+ 1.9	+ 0.0	+ 0.0	− 0.0	+ 1.9	+ 0.9	− 0.0	+ 1.2	± 0.0	Sep.
+ 2.3	+ 2.3	+ 2.7	− 0.4	− 0.0	+ 0.3	+ 0.3	+ 0.0	− 0.3	− 0.5	− 0.3	+ 0.1	± 0.0	Oct.

domicile are regarded as a single branch. **2** Treasury bills, Treasury discount paper and other money market paper, debt securities. **3** Including own debt securities. **4** Excluding subordinated liabilities and non-negotiable debt securities. **5** Issues of negotiable and non-negotiable debt securities and money market paper. **6** Including subordinated liabilities. **7** See also Table IV.2, footnote 1.

V. Minimum reserves

1. Reserve maintenance in the euro area

€ billion

Maintenance period beginning in [1]	Reserve base [2]	Required reserves before deduction of lump-sum allowance [3]	Required reserves after deduction of lump-sum allowance [4]	Current accounts [5]	Excess reserves [6]	Deficiencies [7]
2014	10,677.3	106.8	106.3	236.3	130.1	0.0
2015	11,375.0	113.8	113.3	557.1	443.8	0.0
2016	11,918.5	119.2	118.8	919.0	800.3	0.0
2017	12,415.8	124.2	123.8	1,275.2	1,151.4	0.0
2018	12,775.2	127.8	127.4	1,332.1	1,204.8	0.0
2019	13,485.4	134.9	134.5	1,623.7	1,489.3	0.0
2020	14,590.4	145.9	145.5	3,029.4	2,883.9	0.0
2021 Oct.	.	.	.	.	.	.
Nov.	15,459.2	154.6	154.2	3,843.3	3,689.1	0.0
Dec. p	15,576.6	155.8	155.4	...	...	...

2. Reserve maintenance in Germany

€ billion

Maintenance period beginning in [1]	Reserve base [2]	German share of euro area reserve base as a percentage	Required reserves before deduction of lump-sum allowance [3]	Required reserves after deduction of lump-sum allowance [4]	Current accounts [5]	Excess reserves [6]	Deficiencies [7]
2014	2,876,931	26.9	28,769	28,595	75,339	46,744	4
2015	3,137,353	27.6	31,374	31,202	174,361	143,159	0
2016	3,371,095	28.3	33,711	33,546	301,989	268,443	0
2017	3,456,192	27.8	34,562	34,404	424,547	390,143	2
2018	3,563,306	27.9	35,633	35,479	453,686	418,206	1
2019	3,728,027	27.6	37,280	37,131	486,477	449,346	0
2020	4,020,792	27.6	40,208	40,062	878,013	837,951	1
2021 Oct.	.	.	.	.	.	.	.
Nov.	4,230,453	27.4	42,305	42,164	1,077,135	1,034,972	0
Dec. p	4,260,398	27.4	42,604	42,464	...	...	...

a) Required reserves of individual categories of banks

€ billion

Maintenance period beginning in [1]	Big banks	Regional banks and other commercial banks	Branches of foreign banks	Landesbanken and savings banks	Credit cooperatives	Mortgage banks	Banks with special, development and other central support tasks
2014	5,593	4,966	1,507	9,626	5,375	216	1,312
2015	6,105	5,199	2,012	10,432	5,649	226	1,578
2016	6,384	5,390	2,812	10,905	5,960	236	1,859
2017	6,366	5,678	3,110	11,163	6,256	132	1,699
2018	7,384	4,910	3,094	11,715	6,624	95	1,658
2019	7,684	5,494	2,765	12,273	7,028	109	1,778
2020	8,151	6,371	3,019	12,912	7,547	111	2,028
2021 Oct.	.	.	.	.	.	.	.
Nov.	8,860	6,835	2,911	13,523	7,976	109	1,949
Dec.	.	.	.	.	.	.	.

b) Reserve base by subcategories of liabilities

€ billion

Maintenance period beginning in [1]	Liabilities (excluding savings deposits, deposits with building and loan associations and repos) to non-MFIs with agreed maturities of up to 2 years	Liabilities (excluding repos and deposits with building and loan associations) with agreed maturities of up to 2 years to MFIs that are resident in euro area countries but not subject to minimum reserve requirements	Liabilities (excluding repos and deposits with building and loan associations) with agreed maturities of up to 2 years to banks in non-euro area countries	Savings deposits with agreed periods of notice of up to 2 years	Liabilities arising from bearer debt securities issued with agreed maturities of up to 2 years and bearer money market paper after deduction of a standard amount for bearer debt certificates or deduction of such paper held by the reporting institution
2014	1,904,200	1,795	282,843	601,390	86,740
2015	2,063,317	1,879	375,891	592,110	104,146
2016	2,203,100	1,595	447,524	585,099	133,776
2017	2,338,161	628	415,084	581,416	120,894
2018	2,458,423	1,162	414,463	576,627	112,621
2019	2,627,478	1,272	410,338	577,760	111,183
2020	2,923,462	1,607	436,696	560,770	105,880
2021 Oct.	.	.	.	.	.
Nov.	3,046,878	8,536	502,855	562,198	109,980
Dec.	.	.	.	.	.

1 The reserve maintenance period starts on the settlement day of the main refinancing operation immediately following the meeting of the Governing Council of the ECB for which the discussion on the monetary policy stance is scheduled. **2** Article 3 of the Regulation of the European Central Bank on the application of minimum reserves (excluding liabilities to which a reserve ratio of 0% applies, pursuant to Article 4(1)). **3** Amount after applying the reserve ratio to the reserve base. The reserve ratio for liabilities with agreed maturities of up to two years was 2% between 1 January 1999 and 17 January 2012. Since 18 January 2012, it has stood at 1%. **4** Article 5(2) of the Regulation of the European Central Bank on the application of minimum reserves. **5** Average credit balances of credit institutions at national central banks. **6** Average credit balances less required reserves after deduction of the lump-sum allowance. **7** Required reserves after deduction of the lump-sum allowance.

VI. Interest rates

1. ECB interest rates / basic rates of interest

% per annum

ECB interest rates										Basic rates of interest			
		Main refinancing operations					Main refinancing operations						
Applicable from	Deposit facility	Fixed rate	Minimum bid rate	Marginal lending facility	Applicable from	Deposit facility	Fixed rate	Minimum bid rate	Marginal lending facility	Applicable from	Basic rate of interest as per Civil Code [1]	Applicable from	Basic rate of interest as per Civil Code [1]
2005 Dec. 6	1.25	–	2.25	3.25	2011 Apr. 13	0.50	1.25	–	2.00	2002 Jan. 1	2.57	2009 Jan. 1	1.62
					July 13	0.75	1.50	–	2.25	July 1	2.47	July 1	0.12
2006 Mar. 8	1.50	–	2.50	3.50	Nov. 9	0.50	1.25	–	2.00				
June 15	1.75	–	2.75	3.75	Dec. 14	0.25	1.00	–	1.75	2003 Jan. 1	1.97	2011 July 1	0.37
Aug. 9	2.00	–	3.00	4.00						July 1	1.22		
Oct. 11	2.25	–	3.25	4.25	2012 July 11	0.00	0.75	–	1.50			2012 Jan. 1	0.12
Dec. 13	2.50	–	3.50	4.50						2004 Jan. 1	1.14		
					2013 May 8	0.00	0.50	–	1.00	July 1	1.13	2013 Jan. 1	– 0.13
2007 Mar. 14	2.75	–	3.75	4.75	Nov. 13	0.00	0.25	–	0.75			July 1	– 0.38
June 13	3.00	–	4.00	5.00						2005 Jan. 1	1.21		
					2014 June 11	-0.10	0.15	–	0.40	July 1	1.17	2014 Jan. 1	– 0.63
2008 July 9	3.25	–	4.25	5.25	Sep. 10	-0.20	0.05	–	0.30			July 1	– 0.73
Oct. 8	2.75	–	3.75	4.75						2006 Jan. 1	1.37		
Oct. 9	3.25	3.75	–	4.25	2015 Dec. 9	-0.30	0.05	–	0.30	July 1	1.95	2015 Jan. 1	– 0.83
Nov. 12	2.75	3.25	–	3.75									
Dec. 10	2.00	2.50	–	3.00	2016 Mar. 16	-0.40	0.00	–	0.25	2007 Jan. 1	2.70	2016 July 1	– 0.88
										July 1	3.19		
2009 Jan. 21	1.00	2.00	–	3.00	2019 Sep. 18	-0.50	0.00	–	0.25				
Mar. 11	0.50	1.50	–	2.50						2008 Jan. 1	3.32		
Apr. 8	0.25	1.25	–	2.25						July 1	3.19		
May 13	0.25	1.00	–	1.75									

1 Pursuant to Section 247 of the Civil Code.

2. Eurosystem monetary policy operations allotted through tenders *

			Fixed rate tenders	Variable rate tenders			
Date of Settlement	Bid amount	Allotment amount	Fixed rate	Minimum bid rate	Marginal rate [1]	Weighted average rate	Running for … days
	€ million		% per annum				
Main refinancing operations							
2021 Dec. 22	225	225	0.00	-	-	-	7
Dec. 29	386	386	0.00	-	-	-	7
2022 Jan. 5	430	430	0.00	-	-	-	7
Jan. 12	379	379	0.00	-	-	-	7
Jan. 19	437	437	0.00	-	-	-	7
Long-term refinancing operations							
2021 Oct. 28	40	40	[2] …	-	-	-	91
Nov. 25	10	10	[2] …	-	-	-	91
Dec. 16	1 090	1 090	[2] …	-	-	-	406
Dec. 22	51 975	51 975	[2] …	-	-	-	1 092
Dec. 23	18	18	[2] …	-	-	-	98

***** Source: ECB. **1** Lowest or highest interest rate at which funds were allotted or collected. **2** Interest payment on the maturity date; the rate will be fixed at: a) the average minimum bid rate of the main refinancing operations over the life of this operation including a spread or b) the average deposit facility rate over the life of this operation.

3. Money market rates, by month *

% per annum

Monthly average	€STR [1]	EONIA [1]	EURIBOR [2]				
			One-week funds	One-month funds	Three-month funds	Six-month funds	Twelve-month funds
2021 June	– 0.565	– 0.48	– 0.57	– 0.56	– 0.54	– 0.52	– 0.48
July	– 0.566	– 0.48	– 0.57	– 0.56	– 0.55	– 0.52	– 0.49
Aug.	– 0.568	– 0.48	– 0.57	– 0.56	– 0.55	– 0.53	– 0.50
Sep.	– 0.570	– 0.49	– 0.57	– 0.56	– 0.55	– 0.52	– 0.49
Oct.	– 0.571	– 0.49	– 0.57	– 0.56	– 0.55	– 0.53	– 0.48
Nov.	– 0.573	– 0.49	– 0.57	– 0.57	– 0.57	– 0.53	– 0.49
Dec.	– 0.577	– 0.49	– 0.58	– 0.60	– 0.58	– 0.55	– 0.50

***** Averages are Bundesbank calculations. Neither the Deutsche Bundesbank nor anyone else can be held liable for any irregularity or inaccuracy of the EONIA or the EURIBOR. **1** Euro overnight index average: weighted average overnight rate for interbank operations; calculated by the European Central Bank from January 4th 1999 until September 30th 2019 based on real turnover according to the act/360 method. Since October 1st 2019 calculated as Euro Short-Term Rate (€STR) + 8.5 basis points spread. **2** Euro interbank offered rate: unweighted average rate calculated by Reuters since 30 December 1998 according to the act/360 method. Administrator for EONIA and EURIBOR: European Money Markets Institute (EMMI)

VI. Interest rates

4. Interest rates and volumes for outstanding amounts and new business of German banks (MFIs) *
a) Outstanding amounts o

End of month	Households' deposits				Non-financial corporations' deposits			
	with an agreed maturity of							
	up to 2 years		over 2 years		up to 2 years		over 2 years	
	Effective interest rate 1 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million
2020 Nov.	0.26	52,719	1.00	217,758	– 0.11	80,549	0.85	22,254
Dec.	0.25	53,079	1.00	219,376	– 0.17	79,340	0.84	22,256
2021 Jan.	0.25	51,896	0.99	220,299	– 0.16	74,531	0.85	21,979
Feb.	0.26	51,369	0.98	220,419	– 0.16	72,894	0.85	22,242
Mar.	0.25	51,417	0.98	220,406	– 0.18	77,326	0.83	21,860
Apr.	0.25	50,078	0.97	220,310	– 0.19	74,026	0.84	21,529
May	0.24	48,897	0.96	220,455	– 0.21	74,080	0.83	21,455
June	0.23	48,834	0.95	220,118	– 0.23	71,148	0.88	21,464
July	0.23	45,300	0.94	219,790	– 0.23	69,514	0.82	20,964
Aug.	0.22	44,901	0.93	219,708	– 0.26	68,741	0.81	21,058
Sep.	0.23	44,268	0.93	219,587	– 0.28	69,338	0.78	21,227
Oct.	0.23	43,497	0.92	219,456	– 0.29	75,404	0.77	22,443
Nov.	0.22	42,494	0.91	219,058	– 0.30	70,795	0.76	22,792

End of month	Housing loans to households 3						Loans to households for consumption and other purposes 4,5					
	with a maturity of											
	up to 1 year 6		over 1 year and up to 5 years		over 5 years		up to 1 year 6		over 1 year and up to 5 years		over 5 years	
	Effective interest rate 1 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million
2020 Nov.	1.92	4,616	1.60	27,072	1.99	1,345,468	6.83	44,787	3.38	85,328	3.46	324,149
Dec.	1.92	4,557	1.60	27,024	1.97	1,353,793	6.80	45,013	3.37	85,416	3.45	323,181
2021 Jan.	1.90	4,663	1.59	26,903	1.95	1,357,733	6.90	43,164	3.36	84,363	3.42	323,164
Feb.	1.89	4,642	1.57	26,790	1.93	1,363,884	6.76	43,200	3.36	83,522	3.41	323,393
Mar.	1.89	4,545	1.56	26,788	1.91	1,373,003	6.72	44,263	3.34	83,114	3.40	322,618
Apr.	1.86	4,496	1.56	26,870	1.88	1,381,533	6.65	43,462	3.34	82,596	3.38	323,494
May	1.94	4,575	1.55	26,759	1.87	1,390,096	6.63	43,692	3.33	82,120	3.36	323,923
June	1.91	4,485	1.54	26,949	1.85	1,399,549	6.60	45,343	3.33	81,846	3.35	323,511
July	1.92	4,642	1.53	26,996	1.83	1,410,004	6.53	44,338	3.33	81,734	3.34	325,291
Aug.	1.94	4,581	1.52	27,041	1.82	1,418,884	6.60	44,785	3.33	81,447	3.32	325,890
Sep.	1.94	4,521	1.52	27,117	1.80	1,427,271	6.67	45,750	3.32	81,133	3.32	325,265
Oct.	1.97	4,623	1.52	27,324	1.79	1,436,840	6.59	44,700	3.32	80,768	3.30	326,197
Nov.	2.08	3,680	1.52	26,929	1.77	1,446,574	6.53	44,871	3.32	79,066	3.30	328,130

End of month	Loans to non-financial corporations with a maturity of					
	up to 1 year 6		over 1 year and up to 5 years		over 5 years	
	Effective interest rate 1 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million	Effective interest rate 1 % p.a.	Volume 2 € million
2020 Nov.	2.06	154,555	1.69	187,341	1.75	784,308
Dec.	2.03	150,278	1.71	186,798	1.73	787,188
2021 Jan.	2.06	149,911	1.71	186,599	1.71	790,534
Feb.	2.02	152,425	1.71	189,130	1.70	793,839
Mar.	1.78	163,745	1.67	194,734	1.69	794,245
Apr.	1.96	151,270	1.67	195,027	1.68	798,088
May	1.93	153,129	1.65	194,737	1.68	802,212
June	2.01	149,474	1.65	193,910	1.67	801,420
July	1.94	148,978	1.64	194,327	1.65	808,937
Aug.	1.94	148,766	1.63	196,065	1.64	811,706
Sep.	1.97	149,784	1.64	194,697	1.63	811,174
Oct.	1.92	158,326	1.63	197,964	1.62	813,714
Nov.	1.91	156,265	1.58	203,081	1.61	819,886

***** The interest rate statistics gathered on a harmonised basis in the euro area from January 2003 are collected in Germany on a sample basis. The MFI interest rate statistics are based on the interest rates applied by MFIs and the related volumes of euro-denominated deposits and loans to households and non-financial corporations domiciled in the euro area. The household sector comprises individuals (including sole proprietors) and non-profit institutions serving households. Non-financial corporations include all enterprises other than insurance corporations, banks and other financial institutions. The most recent figures are in all cases to be regarded as provisional. Subsequent revisions appearing in the following Monthly Report are not specially marked. Further information on the MFI interest rate statistics can be found on the Bundesbank's website (Statistics/Money and capital markets/Interest rates and yields/Interest rates on deposits and loans). **o** The statistics on outstanding amounts are collected at the end of the month. **1** The effective interest rates are calculated either as annualised agreed interest rates or as narrowly defined effective rates. Both calculation methods cover all interest payments on deposits and loans but not any other related charges which may occur for enquiries, administration, preparation of the documents, guarantees and credit insurance. **2** Data based on monthly balance sheet statistics. **3** Secured and unsecured loans for home purchase, including building and home improvements; including loans granted by building and loan associations and interim credits as well as transmitted loans granted by the reporting agents in their own name and for their own account. **4** Loans for consumption are defined as loans granted for the purpose of personal use in the consumption of goods and services. **5** For the purpose of these statistics, other loans are loans granted for other purposes such as business, debt consolidation, education, etc. **6** Including overdrafts (see also footnotes 12 to 14 on p. 47).

VI. Interest rates

4. Interest rates and volumes for outstanding amounts and new business of German banks (MFIs) * (cont'd)
b) New business +

Reporting period	Households' deposits											
	Overnight		with an agreed maturity of						redeemable at notice [8] of			
			up to 1 year		over 1 year and up to 2 years		over 2 years		up to 3 months		over 3 months	
	Effective interest rate [1] % p.a.	Volume [2] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [2] € million	Effective interest rate [1] % p.a.	Volume [2] € million
2020 Nov.	0.00	1,703,473	0.11	2,483	0.49	404	0.61	747	0.10	531,537	0.18	27,578
Dec.	0.00	1,715,292	– 0.01	3,214	0.40	394	0.59	794	0.10	532,793	0.18	27,312
2021 Jan.	0.00	1,732,961	0.03	3,036	0.38	357	0.55	734	0.10	534,458	0.17	26,749
Feb.	– 0.00	1,754,413	0.07	2,793	0.36	385	0.50	741	0.09	535,684	0.17	26,435
Mar.	– 0.00	1,750,971	0.06	3,073	0.32	342	0.41	834	0.09	535,778	0.17	26,115
Apr.	– 0.00	1,772,803	0.06	2,465	0.28	379	0.32	591	0.09	536,476	0.17	25,840
May	– 0.01	1,786,469	0.01	2,399	0.37	307	0.32	529	0.09	537,061	0.16	25,715
June	– 0.01	1,788,689	– 0.04	2,957	0.23	310	0.28	566	0.09	536,727	0.16	25,503
July	– 0.01	1,800,235	0.02	2,414	0.28	401	0.29	695	0.08	536,463	0.16	25,216
Aug.	– 0.01	1,797,331	0.02	2,315	0.25	278	0.34	558	0.08	536,145	0.16	24,993
Sep.	– 0.01	1,791,879	– 0.01	2,254	0.26	241	0.34	513	0.08	535,555	0.15	24,780
Oct.	– 0.01	1,800,411	0.06	1,944	0.25	228	0.39	474	0.08	535,197	0.15	24,558
Nov.	– 0.01	1,808,555	0.09	1,879	0.21	266	0.48	650	0.08	535,140	0.15	24,329

Reporting period	Non-financial corporations' deposits							
	Overnight		with an agreed maturity of					
			up to 1 year		over 1 year and up to 2 years		over 2 years	
	Effective interest rate [1] % p.a.	Volume [2] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million
2020 Nov.	– 0.09	549,032	– 0.37	30,418	0.03	220	0.35	533
Dec.	– 0.09	546,575	– 0.42	34,321	– 0.12	556	0.26	970
2021 Jan.	– 0.10	545,028	– 0.23	35,220	– 0.05	126	0.19	129
Feb.	– 0.10	539,935	– 0.26	32,726	– 0.01	113	0.37	537
Mar.	– 0.11	571,025	– 0.12	54,987	0.07	363	0.24	919
Apr.	– 0.10	559,616	– 0.25	52,411	– 0.10	113	0.23	87
May	– 0.11	564,627	– 0.34	53,947	– 0.04	194	0.37	231
June	– 0.12	569,903	– 0.50	64,520	– 0.14	278	0.20	200
July	– 0.12	581,879	– 0.48	57,334	– 0.22	322	0.09	168
Aug.	– 0.13	589,698	– 0.50	47,074	– 0.17	174	0.07	699
Sep.	– 0.12	590,408	– 0.50	48,685	x .	x .	0.11	333
Oct.	– 0.13	598,979	– 0.51	70,382	– 0.21	214	0.19	1,102
Nov.	– 0.13	604,626	– 0.52	47,101	– 0.16	619	0.25	732

Reporting period	Loans to households											
	Loans for consumption [4] with an initial rate fixation of											
	Total (including charges)	Total		of which: Renegotiated loans [9]		floating rate or up to 1 year [9]		over 1 year and up to 5 years		over 5 years		
	Annual percentage rate of charge [10] % p.a.	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million
2020 Nov.	5.71	5.62	7,778	6.24	1,560	8.90	566	4.26	2,797	6.06	4,416
Dec.	5.53	5.48	6,652	6.08	1,193	8.08	551	4.24	2,544	5.97	3,556
2021 Jan.	5.88	5.85	6,836	6.43	1,655	7.99	439	4.45	1,973	6.26	4,423
Feb.	5.65	5.65	7,077	6.34	1,630	7.76	379	4.33	2,194	6.11	4,503
Mar.	5.35	5.27	9,298	6.17	1,786	6.23	384	4.05	3,296	5.92	5,619
Apr.	5.51	5.38	7,926	6.17	1,482	6.76	325	4.25	2,731	5.92	4,871
May	5.49	5.37	7,573	6.21	1,400	7.01	301	4.24	2,605	5.90	4,667
June	5.52	5.40	8,979	6.25	1,741	7.20	359	4.23	3,090	5.94	5,530
July	5.55	5.47	9,279	6.30	1,924	7.15	386	4.26	3,014	5.98	5,880
Aug.	5.54	5.44	8,696	6.29	1,747	7.54	340	4.30	2,828	5.89	5,528
Sep.	5.54	5.46	8,474	6.28	1,669	7.59	323	4.29	2,783	5.94	5,368
Oct.	5.58	5.50	8,375	6.30	1,660	7.55	345	4.34	2,677	5.95	5,353
Nov.	5.46	5.43	8,079	6.17	1,524	7.24	408	4.34	2,691	5.87	4,979

For footnotes * and 1 to 6, see p. 44•. For footnote x see p. 47•. **+** For deposits with an agreed maturity and all loans excluding revolving loans and overdrafts, credit card debt: new business covers all new agreements between households or non-financial corporations and the bank. The interest rates are calculated as volume-weighted average rates of all new agreements concluded during the reporting month. For overnight deposits, deposits redeemable at notice, revolving loans and overdrafts, credit card debt: new business is collected in the same way as outstanding amounts for the sake of simplicity. This means that all outstanding deposit and lending business at the end of the month has to be incorporated in the calculation of average rates of interest. **7** Estimated. The volume of new business is extrapolated to form the underlying total using a grossing-up procedure. **8** Including non-financial corporations' deposits; including fidelity and growth premiums. **9** Excluding overdrafts. **10** Annual percentage rate of charge, which contains other related charges which may occur for enquiries, administration, preparation of the documents, guarantees and credit insurance.

VI. Interest rates

4. Interest rates and volumes for outstanding amounts and new business of German banks (MFIs) * (cont'd)
b) New business +

Reporting period	Loans to households (cont'd)									
	Loans to households for other purposes [5] with an initial rate fixation of									
	Total		of which: Renegotiated loans [9]		floating rate or up to 1 year [9]		over 1 year and up to 5 years		over 5 years	
	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million
Loans to households										
2020 Nov.	1.84	4,026	1.61	930	1.96	1,731	2.44	585	1.51	1,710
Dec.	1.77	5,473	1.56	1,254	1.81	2,404	2.30	772	1.54	2,297
2021 Jan.	1.79	4,530	1.66	1,532	1.93	1,958	2.17	572	1.55	2,000
Feb.	1.71	4,265	1.69	1,000	1.74	1,680	2.08	578	1.58	2,007
Mar.	1.68	5,715	1.59	1,331	1.69	2,358	2.20	691	1.53	2,666
Apr.	1.65	4,662	1.52	1,263	1.58	1,956	2.08	724	1.55	1,982
May	1.74	3,877	1.51	909	1.79	1,589	2.32	550	1.51	1,738
June	1.63	5,170	1.53	1,119	1.55	2,198	2.26	702	1.51	2,270
July	1.68	4,950	1.50	1,428	1.71	1,920	2.09	732	1.52	2,298
Aug.	1.74	4,101	1.60	806	1.88	1,594	2.17	612	1.48	1,895
Sep.	1.65	4,401	1.46	951	1.72	1,950	1.99	626	1.47	1,825
Oct.	1.69	4,327	1.54	1,068	1.79	1,792	2.23	631	1.42	1,904
Nov.	1.68	4,431	1.39	847	1.65	1,759	2.42	704	1.44	1,968
of which: Loans to sole proprietors										
2020 Nov.	1.83	2,743	.	.	1.85	1,118	2.53	438	1.55	1,187
Dec.	1.85	3,793	.	.	1.87	1,629	2.47	523	1.63	1,641
2021 Jan.	1.77	3,041	.	.	1.76	1,281	2.34	402	1.62	1,358
Feb.	1.86	2,843	.	.	1.89	1,058	2.40	390	1.70	1,395
Mar.	1.78	3,846	.	.	1.83	1,507	2.26	535	1.60	1,804
Apr.	1.73	3,212	.	.	1.65	1,316	2.17	555	1.62	1,341
May	1.85	2,624	.	.	1.93	1,052	2.29	451	1.59	1,121
June	1.70	3,581	.	.	1.64	1,516	2.38	508	1.52	1,557
July	1.71	3,514	.	.	1.75	1,339	2.10	587	1.53	1,588
Aug.	1.89	2,666	.	.	2.05	1,045	2.35	441	1.57	1,180
Sep.	1.72	2,879	.	.	1.76	1,259	2.21	444	1.49	1,176
Oct.	1.75	2,884	.	.	1.84	1,193	2.17	514	1.46	1,177
Nov.	1.83	2,674	.	.	1.83	1,076	2.47	461	1.56	1,137

Erhebungszeitraum	Loans to households (cont'd)													
	Housing loans [3] with an initial rate fixation of													
	Total (including charges)	Total		of which: Renegotiated loans [9]		floating rate or up to 1 year [9]		over 1 year and up to 5 years		over 5 year and up to 10 years		over 10 years	
	Annual percentage rate of charge [10] % p.a.	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million
Total loans													
2020 Nov.	1.22	1.17	23,185	1.28	3,113	1.72	2,372	1.28	1,708	1.03	7,413	1.14	11,692
Dec.	1.21	1.16	22,148	1.29	3,033	1.75	2,195	1.31	1,698	1.02	7,733	1.11	10,522
2021 Jan.	1.23	1.19	21,721	1.32	3,866	1.79	2,124	1.34	1,615	1.03	7,316	1.15	10,666
Feb.	1.22	1.17	22,145	1.30	3,246	1.73	2,098	1.28	1,563	1.04	7,547	1.14	10,938
Mar.	1.22	1.18	28,589	1.26	4,248	1.75	2,684	1.25	1,958	1.02	10,006	1.17	13,941
Apr.	1.27	1.23	24,541	1.30	3,804	1.79	2,343	1.28	1,725	1.06	8,741	1.23	11,732
May	1.31	1.27	22,786	1.35	3,379	1.83	2,064	1.30	1,568	1.09	8,416	1.29	10,738
June	1.34	1.29	25,161	1.34	3,327	1.74	2,374	1.33	1,775	1.12	9,196	1.33	11,815
July	1.36	1.31	25,121	1.36	3,808	1.76	2,686	1.32	1,649	1.14	9,216	1.34	11,570
Aug.	1.31	1.27	22,735	1.32	3,095	1.78	2,324	1.37	1,514	1.10	7,975	1.28	10,922
Sep.	1.31	1.26	22,232	1.33	2,986	1.80	2,204	1.33	1,451	1.09	7,631	1.27	10,946
Oct.	1.32	1.28	22,630	1.29	3,683	1.79	2,353	1.33	1,613	1.10	8,013	1.29	10,650
Nov.	1.36	1.32	22,516	1.31	3,079	1.83	2,022	1.43	1,564	1.15	8,171	1.33	10,759
of which: Collateralised loans [11]													
2020 Nov.	.	1.10	10,137	.	.	1.61	819	1.10	823	0.96	3,182	1.11	5,313
Dec.	.	1.08	9,592	.	.	1.63	796	1.12	781	0.95	3,355	1.07	4,660
2021 Jan.	.	1.13	9,731	.	.	1.71	814	1.11	780	0.97	3,226	1.14	4,911
Feb.	.	1.11	9,659	.	.	1.60	752	1.08	773	0.96	3,228	1.14	4,906
Mar.	.	1.11	12,754	.	.	1.69	929	1.08	884	0.95	4,589	1.14	6,352
Apr.	.	1.15	10,483	.	.	1.71	801	1.10	822	1.00	3,834	1.18	5,026
May	.	1.19	9,797	.	.	1.74	747	1.09	725	1.01	3,738	1.25	4,587
June	.	1.23	10,630	.	.	1.69	836	1.14	793	1.06	4,071	1.29	4,930
July	.	1.25	10,467	.	.	1.66	934	1.15	749	1.08	3,906	1.33	4,878
Aug.	.	1.21	9,407	.	.	1.67	821	1.21	665	1.03	3,442	1.25	4,479
Sep.	.	1.20	9,471	.	.	1.67	802	1.13	664	1.03	3,299	1.24	4,706
Oct.	.	1.20	9,766	.	.	1.70	874	1.16	746	1.02	3,569	1.25	4,577
Nov.	.	1.23	9,668	.	.	1.72	708	1.22	685	1.08	3,670	1.29	4,605

For footnotes * and 1 to 6, see p. 44•. For footnotes + and 7 to 10, see p. 45•; footnote 11, see p. 47•.

VI. Interest rates

4. Interest rates and volumes for outstanding amounts and new business of German banks (MFIs) * (cont'd)
b) New business +

Reporting period	Loans to households (cont'd)						Loans to non-financial corporations			
	Revolving loans [12] and overdrafts [13] Credit card debt [14]		of which: Revolving loans [12] and overdrafts [13]		of which: Extended credit card debt		Revolving loans [12] and overdrafts [13] Credit card debt [14]		of which: Revolving loans [12] and overdrafts [13]	
	Effective interest rate [1] % p.a.	Volume [2] € million	Effective interest rate [1] % p.a.	Volume [2] € million	Effective interest rate [1] % p.a.	Volume [2] € million	Effective interest rate [1] % p.a.	Volume [2] € million	Effective interest rate [1] % p.a.	Volume [2] € million
2020 Nov.	7.41	35,700	7.17	28,273	15.06	4,108	2.74	75,596	2.75	75,326
Dec.	7.32	36,062	7.11	28,411	15.15	4,101	2.70	73,441	2.71	73,178
2021 Jan.	7.51	34,191	7.08	27,635	15.28	4,011	2.77	71,756	2.78	71,526
Feb.	7.40	34,121	7.03	27,298	15.38	3,944	2.76	73,589	2.77	73,354
Mar.	7.41	34,973	7.11	27,993	15.45	3,910	2.77	72,139	2.78	71,866
Apr.	7.37	34,035	7.02	27,152	15.48	3,899	2.84	70,358	2.85	70,106
May	7.28	34,454	7.01	27,148	15.51	3,905	2.79	72,023	2.80	71,766
June	7.23	35,815	7.05	28,056	15.55	3,938	2.86	72,488	2.87	72,184
July	7.11	35,046	6.90	27,102	15.54	3,987	2.75	73,098	2.76	72,788
Aug.	7.12	35,662	6.99	27,343	15.58	4,039	2.79	72,942	2.80	72,622
Sep.	7.19	36,720	7.06	28,404	15.53	4,098	2.79	74,750	2.81	74,389
Oct.	7.10	35,633	6.94	27,535	15.02	4,109	2.81	75,550	2.83	75,182
Nov.	7.01	36,013	6.90	27,565	15.01	4,153	2.77	76,283	2.78	75,880

Reporting period	Loans to non-financial corporations (cont'd)															
	Total		of which: Renegotiated loans [9]		Loans up to €1 million [15] with an initial rate fixation of: floating rate or up to 1 year [9]		over 1 year and up to 5 years		over 5 years		Loans over €1 million [15] with an initial rate fixation of: floating rate or up to 1 year [9]		over 1 year and up to 5 years		over 5 years	
	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million	Effective interest rate [1] % p.a.	Volume [7] € million
Total loans																
2020 Nov.	1.39	62,811	1.39	18,016	1.96	9,897	2.25	1,343	1.53	1,647	1.25	37,080	1.47	4,017	1.13	8,827
Dec.	1.33	87,725	1.37	26,272	2.01	9,615	2.31	1,615	1.56	2,110	1.23	56,078	1.36	4,945	1.11	13,362
2021 Jan.	1.36	55,365	1.52	17,883	1.99	8,828	2.30	1,183	1.56	1,552	1.22	35,711	1.45	2,185	1.03	5,906
Feb.	1.37	54,516	1.55	14,708	2.00	8,851	2.23	1,084	1.57	1,533	1.22	32,922	1.37	2,679	1.09	7,447
Mar.	1.09	93,353	1.59	21,948	1.90	10,691	2.16	1,432	1.54	1,842	0.89	62,746	1.17	6,173	1.20	10,469
Apr.	1.52	56,777	1.55	18,920	1.90	9,318	2.23	1,385	1.55	1,553	1.46	35,109	1.43	3,022	1.15	6,390
May	1.32	58,626	1.53	16,038	1.89	8,462	2.33	1,179	1.56	1,578	1.20	36,993	1.42	2,491	1.06	7,923
June	1.28	83,129	1.29	27,883	1.93	9,481	2.37	1,409	1.54	1,734	1.19	52,578	0.78	6,948	1.28	10,979
July	1.35	70,171	1.42	20,858	1.84	9,608	2.26	1,403	1.52	1,753	1.30	41,858	1.29	3,934	1.00	11,615
Aug.	1.33	54,047	1.58	14,739	1.79	7,827	2.31	1,094	1.44	1,308	1.25	33,740	1.14	3,001	1.08	7,077
Sep.	1.36	69,341	1.33	23,411	1.83	9,309	2.39	1,198	1.48	1,245	1.28	45,311	1.44	4,339	1.06	7,939
Oct.	1.21	71,404	1.32	20,386	1.76	9,149	2.38	1,247	1.50	1,242	1.08	48,160	1.43	2,573	1.07	9,033
Nov.	1.18	75,363	1.34	18,829	1.85	9,681	2.35	1,402	1.44	1,474	1.03	48,548	0.95	4,444	1.16	9,814
of which: Collateralised loans [11]																
2020 Nov.	1.54	9,630	.	.	1.86	375	1.67	98	1.20	367	1.64	5,414	2.01	807	1.18	2,569
Dec.	1.33	15,369	.	.	1.68	494	1.68	134	1.16	452	1.41	8,979	1.39	1,222	1.11	4,088
2021 Jan.	1.25	7,702	.	.	1.73	430	1.65	99	1.32	374	1.26	4,614	1.69	574	0.88	1,611
Feb.	1.42	6,642	.	.	1.83	339	1.67	89	1.07	331	1.61	3,930	1.31	383	0.96	1,570
Mar.	1.19	13,787	.	.	1.64	481	1.81	106	1.17	399	1.12	8,540	1.33	825	1.23	3,436
Apr.	1.44	7,883	.	.	1.79	377	1.68	117	1.15	359	1.55	4,450	1.51	967	1.07	1,613
May	1.46	7,097	.	.	1.76	340	1.73	75	1.21	404	1.68	3,830	1.15	439	1.11	2,009
June	1.36	13,761	.	.	1.79	410	1.84	109	1.20	444	1.35	8,365	1.38	1,110	1.35	3,323
July	1.41	10,857	.	.	1.68	445	1.57	117	1.24	404	1.56	6,539	1.30	933	1.02	2,419
Aug.	1.45	7,709	.	.	1.81	328	1.76	85	1.18	308	1.55	4,191	1.69	819	1.09	1,978
Sep.	1.35	11,637	.	.	1.71	405	2.14	61	1.17	284	1.35	7,760	1.92	827	1.06	2,300
Oct.	1.29	10,023	.	.	1.72	371	1.87	78	1.24	298	1.46	5,810	1.90	660	0.73	2,806
Nov.	1.34	8,063	.	.	1.76	359	1.60	96	1.19	382	1.43	4,536	1.36	704	1.08	1,986

For footnotes * and 1 to 6, see p. 44•. For footnotes + and 7 to 10, see p. 45•; **11** For the purposes of the interest rate statistics, a loan is considered to be secured if collateral (amongst others financial collateral, real estate collateral, debt securities) in at least the same value as the loan amount has been posted, pledged or assigned. **12** Including revolving loans which have all the following features: (a) the borrower may use or withdraw the funds to a pre-approved credit limit without giving prior notice to the lender; (b) the amount of available credit can increase and decrease as funds are borrowed and repaid; (c) the loan may be used repeatedly; (d) there is no obligation of regular repayment of funds. **13** Overdrafts are defined as debit balances on current accounts. They include all bank overdrafts regardless of whether they are within or beyond the limits agreed between customers and the bank. **14** Including convenience and extended credit card debt. Convenience credit is defined as the credit granted at an interest rate of 0% in the period between payment transactions effected with the card during one billing cycle and the date at which the debt balances from this specific billing cycle become due. **15** The amount category refers to the single loan transaction considered as new business. **x** Dominated by the business of one or two banks. Therefore, the value cannot be published due to confidentiality.

VII. Insurance corporations and pension funds

1. Assets

€ billion

End of year/quarter	Total	Currency and deposits [1]	Debt securities	Loans [2]	Shares and other equity	Investment fund shares/units	Financial derivatives	Technical reserves [3]	Non-financial assets	Remaining assets
Insurance corporations [4]										
2019 Q1	2,343.3	332.1	431.8	329.8	380.9	708.9	2.6	58.7	37.1	61.4
Q2	2,407.6	336.8	449.0	339.3	387.9	735.8	3.6	57.9	37.1	60.3
Q3	2,492.5	333.0	468.5	357.2	398.2	768.3	4.6	58.8	38.0	66.0
Q4	2,473.9	317.6	448.2	355.5	407.3	778.3	3.6	64.9	39.8	58.8
2020 Q1	2,426.9	318.3	452.1	364.0	383.0	738.4	4.5	68.5	38.6	59.6
Q2	2,517.7	317.1	460.6	371.9	409.2	789.0	4.3	68.5	38.7	58.5
Q3	2,547.5	311.1	472.9	373.9	411.0	809.9	4.4	67.1	39.0	58.1
Q4	2,587.9	301.8	479.0	370.6	425.0	841.7	4.7	68.2	38.2	58.7
2021 Q1	2,574.8	292.8	466.8	361.9	437.0	845.0	3.9	71.9	38.4	57.0
Q2	2,590.6	281.3	466.5	361.6	448.0	864.5	3.5	72.5	38.6	54.1
Q3	2,632.3	272.9	472.2	358.7	461.8	881.6	3.4	87.9	38.1	55.8
Life insurance										
2019 Q1	1,239.7	202.9	213.7	206.1	52.8	517.7	1.6	10.4	20.3	14.1
Q2	1,291.9	205.8	227.6	214.2	55.4	538.9	2.4	10.0	20.3	17.4
Q3	1,350.1	205.3	242.5	225.2	57.9	563.6	3.1	10.4	20.9	21.0
Q4	1,325.2	194.9	227.6	217.6	61.1	570.4	2.4	13.7	21.1	16.5
2020 Q1	1,295.8	191.5	231.0	220.6	61.9	538.2	2.2	13.9	20.3	16.3
Q2	1,347.1	192.4	234.4	223.6	64.1	577.3	2.8	13.7	20.3	18.5
Q3	1,369.2	188.4	241.6	225.7	65.7	593.0	3.0	13.6	20.6	17.6
Q4	1,395.9	183.6	242.8	229.9	69.7	617.1	3.3	14.3	20.8	14.5
2021 Q1	1,361.7	170.7	231.7	219.7	74.2	614.8	2.1	14.3	21.0	13.1
Q2	1,373.1	165.0	231.7	219.6	77.9	627.8	2.0	14.2	21.2	13.7
Q3	1,388.0	160.0	232.8	215.1	87.2	643.1	2.0	13.5	20.6	13.8
Non-life insurance										
2019 Q1	655.2	119.1	127.5	74.4	76.2	177.1	0.3	38.2	11.0	31.4
Q2	665.6	119.8	131.1	76.1	78.2	182.4	0.4	37.7	11.0	29.1
Q3	682.6	116.9	135.3	79.9	80.6	189.4	0.4	38.8	11.3	30.0
Q4	673.5	111.3	130.4	79.6	83.6	193.3	0.4	36.2	12.2	26.7
2020 Q1	669.4	111.1	131.3	79.8	80.0	186.9	0.3	38.7	12.0	29.3
Q2	685.6	111.9	134.4	82.4	81.1	197.1	0.4	39.5	12.1	26.7
Q3	693.3	109.3	137.6	83.3	82.7	203.2	0.4	38.5	12.1	26.3
Q4	703.5	105.9	139.5	84.5	85.2	210.3	0.5	37.6	12.7	27.3
2021 Q1	715.8	108.2	139.3	83.7	88.1	214.8	0.4	39.9	12.8	28.6
Q2	718.1	103.5	140.0	83.6	89.2	221.1	0.4	40.2	12.7	27.3
Q3	725.3	99.0	140.5	84.0	91.9	222.4	0.5	46.4	12.8	27.8
Reinsurance [5]										
2019 Q1	448.4	10.1	90.6	49.3	251.9	14.0	0.7	10.2	5.8	15.9
Q2	450.1	11.1	90.4	49.0	254.3	14.4	0.8	10.2	5.8	13.9
Q3	459.9	10.8	90.7	52.1	259.6	15.3	1.0	9.6	5.9	15.0
Q4	475.2	11.5	90.2	58.3	262.6	14.5	0.8	15.1	6.6	15.6
2020 Q1	461.7	15.7	89.8	63.7	241.0	13.3	1.9	15.9	6.3	14.1
Q2	485.0	12.9	91.7	65.9	264.0	14.6	1.1	15.2	6.3	13.3
Q3	485.0	13.5	93.7	64.9	262.6	13.7	1.0	15.0	6.3	14.2
Q4	488.5	12.3	96.7	56.3	270.2	14.3	1.0	16.3	4.7	16.9
2021 Q1	497.3	13.9	95.8	58.5	274.7	15.4	1.4	17.7	4.7	15.3
Q2	499.4	12.8	94.8	58.4	280.9	15.6	1.0	18.1	4.6	13.1
Q3	519.0	13.8	98.9	59.6	282.7	16.1	1.0	27.9	4.7	14.2
Pension funds [6]										
2019 Q1	691.3	89.6	72.4	30.5	32.4	390.9	–	8.3	45.2	22.0
Q2	707.9	87.6	76.5	31.0	34.1	402.0	–	8.5	46.0	22.2
Q3	726.5	85.6	80.7	31.0	36.5	415.5	–	8.6	46.7	22.0
Q4	735.8	85.2	79.6	31.1	38.7	421.1	–	8.8	48.9	22.3
2020 Q1 [7]	599.1	92.2	57.0	48.5	9.3	361.3	0.1	10.4	17.5	2.7
Q2	623.3	92.2	58.8	49.1	9.7	382.1	0.1	10.4	18.1	2.8
Q3	635.9	90.8	59.6	50.2	10.1	392.8	0.2	11.6	18.2	2.5
Q4	647.7	85.8	59.7	47.4	10.1	412.2	0.2	11.9	17.3	3.2
2021 Q1	661.5	86.9	59.2	48.6	10.9	423.9	0.2	12.3	17.3	2.3
Q2	680.8	86.8	61.3	49.4	11.5	439.3	0.1	12.5	17.7	2.3
Q3	686.5	85.4	61.9	48.9	12.2	445.3	0.1	12.7	17.8	2.3

Sources: The calculations for the insurance sectors are based on supervisory data according to Solvency I and II and for pension funds on IORP supervisory data and own data collections as of 2020 Q1. Until 2019 Q4 these are compiled using Solvency I supervisory data, supplemented by voluntary reports and own calculations. **1** Accounts receivable to monetary financial institutions, including registered bonds, borrowers' note loans and registered Pfandbriefe. For pension funds as of 2020 Q1 fair values, previously book values. **2** Including deposits retained on assumed reinsurance as well as registered bonds, borrowers' note loans and registered Pfandbriefe. For pension funds as of 2020 Q1 fair values, previously book values. **3** Including reinsurance recoverables and claims of pension funds on pension managers. **4** Valuation of listed securities at the corresponding consistent price from the ESCB's securities database. **5** Not including the reinsurance business conducted by primary insurers, which is included there. **6** The term "pension funds" refers to the institutional sector "pension funds" of the European System of Accounts. Pension funds thus comprise company pension schemes and occupational pension schemes for the self-employed. Social security funds are not included. **7** Change in data sources.

VII. Insurance corporations and pension funds

2. Liabilities

€ billion

End of year/quarter	Total	Debt securities issued	Loans [1]	Shares and other equity	Technical reserves			Financial derivatives	Remaining liabilities	Net worth [4]
					Total [2]	Life/ pension entitlements [3]	Non-life			
Insurance corporations										
2019 Q1	2,343.3	31.6	68.2	487.9	1,624.8	1,403.6	221.2	1.5	129.2	–
Q2	2,407.6	31.9	69.4	489.7	1,687.4	1,466.0	221.4	1.8	127.5	–
Q3	2,492.5	31.7	69.3	488.5	1,769.4	1,543.0	226.4	2.2	131.5	–
Q4	2,473.9	31.7	75.8	515.3	1,714.9	1,499.6	215.3	1.9	134.3	–
2020 Q1	2,426.9	31.8	82.4	464.3	1,721.9	1,483.2	238.7	2.4	124.1	–
Q2	2,517.7	33.1	82.2	505.4	1,767.7	1,527.7	240.0	1.9	127.4	–
Q3	2,547.5	34.3	80.0	515.9	1,785.7	1,549.2	236.5	1.7	129.9	–
Q4	2,587.9	36.6	79.7	540.5	1,799.2	1,579.3	219.9	1.6	130.3	–
2021 Q1	2,574.8	34.8	81.4	550.5	1,778.0	1,541.0	237.0	2.5	127.7	–
Q2	2,590.6	33.0	81.3	556.7	1,793.2	1,556.4	236.9	2.2	124.0	–
Q3	2,632.3	35.4	82.8	564.0	1,817.2	1,568.7	248.5	2.5	130.4	–
Life insurance										
2019 Q1	1,239.7	4.1	14.4	120.9	1,058.9	1,058.9	–	0.4	41.1	–
Q2	1,291.9	4.1	14.5	121.8	1,108.6	1,108.6	–	0.4	42.4	–
Q3	1,350.1	3.7	15.6	116.0	1,171.9	1,171.9	–	0.6	42.4	–
Q4	1,325.2	3.6	19.1	127.6	1,129.6	1,129.6	–	0.5	44.7	–
2020 Q1	1,295.8	3.6	19.3	114.3	1,117.8	1,117.8	–	0.6	40.3	–
Q2	1,347.1	3.8	19.2	129.8	1,150.3	1,150.3	–	0.5	43.4	–
Q3	1,369.2	3.9	19.5	136.8	1,164.8	1,164.8	–	0.5	43.7	–
Q4	1,395.9	3.9	20.7	142.9	1,185.7	1,185.7	–	0.5	42.3	–
2021 Q1	1,361.7	3.3	19.9	143.2	1,154.2	1,154.2	–	1.0	40.1	–
Q2	1,373.1	3.3	20.4	144.3	1,165.1	1,165.1	–	1.0	39.0	–
Q3	1,388.0	3.3	19.4	148.0	1,176.1	1,176.1	–	1.1	40.1	–
Non-life insurance										
2019 Q1	655.2	1.1	9.3	144.1	448.5	328.9	119.6	0.0	52.2	–
Q2	665.6	1.1	8.8	147.0	459.4	341.5	117.8	0.1	49.3	–
Q3	682.6	1.2	9.1	149.7	471.9	354.8	117.1	0.1	50.6	–
Q4	673.5	1.2	9.3	153.7	457.2	349.4	107.8	0.1	52.0	–
2020 Q1	669.4	1.3	9.8	142.0	468.2	344.4	123.8	0.1	48.0	–
Q2	685.6	1.3	9.5	149.4	478.2	355.6	122.6	0.1	47.1	–
Q3	693.3	1.2	9.6	152.0	482.3	362.4	119.9	0.1	48.1	–
Q4	703.5	1.3	9.7	158.1	483.1	368.7	114.4	0.0	51.3	–
2021 Q1	715.8	1.2	10.6	161.8	491.4	362.5	128.9	0.1	50.6	–
Q2	718.1	1.2	10.5	164.5	493.4	366.2	127.1	0.1	48.4	–
Q3	725.3	1.2	10.5	166.3	498.8	367.9	130.9	0.2	48.4	–
Reinsurance [5]										
2019 Q1	448.4	26.5	44.5	222.9	117.4	15.8	101.6	1.1	36.0	–
Q2	450.1	26.6	46.1	220.8	119.4	15.8	103.6	1.3	35.9	–
Q3	459.9	26.8	44.7	222.8	125.6	16.3	109.3	1.5	38.5	–
Q4	475.2	26.9	47.4	234.0	128.0	20.6	107.5	1.3	37.7	–
2020 Q1	461.7	26.9	53.3	208.1	135.9	21.0	114.9	1.7	35.8	–
Q2	485.0	28.1	53.5	226.2	139.1	21.8	117.4	1.3	36.8	–
Q3	485.0	29.2	50.9	227.0	138.7	22.1	116.6	1.0	38.1	–
Q4	488.5	31.4	49.3	239.6	130.4	24.8	105.6	1.0	36.7	–
2021 Q1	497.3	30.2	50.9	245.5	132.4	24.2	108.1	1.4	37.0	–
Q2	499.4	28.5	50.4	247.9	134.7	25.0	109.7	1.1	36.7	–
Q3	519.0	30.9	53.0	249.7	142.2	24.7	117.5	1.3	41.9	–
Pension funds [6]										
2019 Q1	691.3	–	8.1	8.1	613.8	613.8	–	–	2.9	58.4
Q2	707.9	–	8.1	8.3	620.3	620.3	–	–	2.8	68.4
Q3	726.5	–	8.2	8.4	628.2	628.2	–	–	2.9	78.9
Q4	735.8	–	8.4	8.6	638.0	638.0	–	–	3.7	77.1
2020 Q1 [7]	599.1	–	1.6	19.4	497.3	496.7	–	0.3	8.1	72.4
Q2	623.3	–	1.6	21.6	506.4	505.8	–	0.3	8.3	85.0
Q3	635.9	–	1.6	22.4	510.0	509.3	–	0.3	8.7	92.9
Q4	647.7	–	1.6	21.8	516.3	515.6	–	0.3	8.9	98.8
2021 Q1	661.5	–	1.5	23.6	526.8	526.1	–	0.3	8.6	100.7
Q2	680.8	–	1.6	26.4	532.4	531.7	–	0.4	9.2	110.8
Q3	686.5	–	1.6	27.2	536.2	535.6	–	0.4	9.2	112.0

Sources: The calculations for the insurance sectors are based on supervisory data according to Solvency I and II and for pension funds on IORP supervisory data and own data collections as of 2020 Q1. Until 2019 Q4 these are compiled using Solvency I supervisory data, supplemented by voluntary reports and own calculations. **1** Including deposits retained on ceded business as well as registered bonds, borrowers' note loans and registered Pfandbriefe. **2** Including claims of pension funds on pension managers and entitlements to non-pension benefits. **3** Technical reserves "life" taking account of transitional measures. Health insurance is also included in the "non-life insurance" sector. **4** Own funds correspond to the sum of "Net worth" and "Shares and other equity". **5** Not including the reinsurance business conducted by primary insurers, which is included there. **6** Valuation at book values. The term "pension funds" refers to the institutional sector "pension funds" of the European System of Accounts. Pension funds thus comprise company pension schemes and occupational pension schemes for the self-employed. Social security funds are not included. **7** Change in data sources.

VIII. Capital market

1. Sales and purchases of debt securities and shares in Germany

€ million

Period	Debt securities											
		Sales					Purchases					
		Domestic debt securities [1]					Residents					
	Sales = total purchases	Total	Bank debt securities	Corporate bonds (non-MFIs) [2]	Public debt securities	Foreign debt securities [3]	Total [4]	Credit institutions including building and loan associations [5]	Deutsche Bundesbank	Other sectors [6]	Non-residents [7]	
2009	70,208	– 538	– 114,902	22,709	91,655	70,747	90,154	12,973	8,645	68,536	– 19,945	
2010	146,620	– 1,212	– 7,621	24,044	– 17,635	147,831	92,682	– 103,271	22,967	172,986	53,938	
2011	33,649	13,575	– 46,796	850	59,521	20,075	– 23,876	– 94,793	36,805	34,112	57,525	
2012	51,813	– 21,419	– 98,820	– 8,701	86,103	73,231	– 3,767	– 42,017	– 3,573	41,823	55,581	
2013	– 15,971	– 101,616	– 117,187	153	15,415	85,645	16,409	– 25,778	– 12,708	54,895	– 32,379	
2014	64,775	– 31,962	– 47,404	– 1,330	16,776	96,737	50,408	– 12,124	– 11,951	74,483	14,366	
2015	33,024	– 36,010	– 65,778	26,762	3,006	69,034	116,493	– 66,330	121,164	61,659	– 83,471	
2016	71,380	27,429	19,177	18,265	– 10,012	43,951	164,148	– 58,012	187,500	34,660	– 92,768	
2017	54,840	11,563	1,096	7,112	3,356	43,277	137,907	– 71,454	161,012	48,349	– 83,067	
2018	61,661	16,630	33,251	12,433	– 29,055	45,031	95,902	– 24,417	67,328	52,991	– 34,241	
2019	137,356	68,536	29,254	32,505	6,778	68,820	62,915	8,059	2,408	52,448	74,441	
2020	438,208	382,059	14,257	89,473	278,328	56,150	278,521	18,955	226,887	32,679	159,688	
2021 Jan.	56,876	27,740	3,995	3,797	19,948	29,136	43,949	8,455	13,518	21,976	12,927	
Feb.	42,555	19,574	3,411	– 2,569	18,732	22,980	43,479	– 3,738	20,397	26,821	– 925	
Mar.	39,153	39,488	21,772	551	17,165	– 334	24,601	6,152	20,708	– 2,259	14,553	
Apr.	17,262	12,392	– 2,704	6,063	9,032	4,870	25,929	– 17,641	24,095	19,475	– 8,668	
May	37,055	32,136	– 3,450	7,311	28,274	4,919	32,266	– 2,194	25,538	8,922	4,789	
June	29,666	15,241	1,998	– 288	13,531	14,426	31,901	– 583	22,605	9,879	– 2,235	
July	13,429	6,113	– 9,235	3,717	11,631	7,316	31,061	– 5,500	25,087	11,474	– 17,632	
Aug.	25,703	33,565	6,870	1,245	25,449	– 7,862	10,463	– 5,337	17,312	– 1,511	15,239	
Sep.	23,518	13,731	11,555	8,212	– 6,037	9,787	30,686	6,387	17,663	6,637	– 7,168	
Oct.	– 564	2,824	7,365	– 7,501	2,960	– 3,388	8,400	– 17,904	20,765	5,539	– 8,963	
Nov.	41,448	33,284	4,330	8,350	20,605	8,164	35,832	– 520	23,375	12,978	5,615	

€ million

Period	Shares						
		Sales		Purchases			
				Residents			
	Sales = total purchases	Domestic shares [8]	Foreign shares [9]	Total [10]	Credit institutions [5]	Other sectors [11]	Non-residents [12]
2009	35,980	23,962	12,018	30,496	– 8,335	38,831	5,485
2010	37,767	20,049	17,718	36,406	7,340	29,066	1,360
2011	25,833	21,713	4,120	40,804	670	40,134	– 14,971
2012	15,061	5,120	9,941	14,405	10,259	4,146	656
2013	20,187	10,106	10,081	17,336	11,991	5,345	2,851
2014	43,501	18,778	24,723	43,950	17,203	26,747	– 449
2015	44,165	7,668	36,497	34,437	– 5,421	39,858	9,728
2016	30,896	4,409	26,487	31,037	– 5,143	36,180	– 141
2017	51,571	15,570	36,001	49,913	7,031	42,882	1,658
2018	55,729	16,188	39,541	83,036	– 11,184	94,220	– 27,307
2019	47,115	9,076	38,039	33,573	– 1,119	34,692	13,542
2020	84,953	17,771	67,182	116,813	27	116,786	– 31,860
2021 Jan.	– 7,264	1,441	– 8,705	– 10,433	863	– 11,296	3,169
Feb.	9,412	2,729	6,683	11,010	1,501	9,509	– 1,598
Mar.	20,639	8,964	11,676	17,986	1,285	16,701	2,653
Apr.	17,279	882	16,397	15,913	1,816	14,097	1,366
May	4,781	1,170	3,612	3,907	– 387	4,294	875
June	12,085	5,166	6,919	14,962	36	14,926	– 2,878
July	5,793	825	4,968	3,502	– 74	3,576	2,291
Aug.	11,833	4,667	7,166	12,131	204	11,927	– 297
Sep.	13,541	4,660	8,881	15,127	3,374	11,753	– 1,586
Oct.	11,194	5,498	5,696	16,212	1,401	14,811	– 5,018
Nov.	6,479	2,367	4,113	15,696	2,700	12,996	– 9,216

1 Net sales at market values plus/minus changes in issuers' portfolios of their own debt securities. **2** Including cross-border financing within groups from January 2011. **3** Net purchases or net sales (-) of foreign debt securities by residents; transaction values. **4** Domestic and foreign debt securities. **5** Book values; statistically adjusted. **6** Residual; also including purchases of domestic and foreign securities by domestic mutual funds. Up to end-2008 including Deutsche Bundesbank. **7** Net purchases or net sales (-) of domestic debt securities by non-residents; transaction values. **8** Excluding shares of public limited investment companies; at issue prices. **9** Net purchases or net sales (-) of foreign shares (including direct investment) by residents; transaction values. **10** Domestic and foreign shares. **11** Residual; also including purchases of domestic and foreign securities by domestic mutual funds. **12** Net purchases or net sales (-) of domestic shares (including direct investment) by non-residents; transaction values. — The figures for the most recent date are provisional; revisions are not specially marked.

VIII. Capital market

2. Sales of debt securities issued by residents *

€ million, nominal value

Period	Total	Bank debt securities 1					Corporate bonds (non-MFIs) 2	Public debt securities
		Total	Mortgage Pfandbriefe	Public Pfandbriefe	Debt securities issued by special-purpose credit institutions	Other bank debt securities		
	Gross sales							
2010	1,375,138	757,754	36,226	33,539	363,828	324,160	53,653	563,730
2011	1,337,772	658,781	31,431	24,295	376,876	226,180	86,614	592,375
2012	1,340,568	702,781	36,593	11,413	446,153	208,623	63,258	574,530
2013	1,433,628	908,107	25,775	12,963	692,611	176,758	66,630	458,892
2014	1,362,056	829,864	24,202	13,016	620,409	172,236	79,873	452,321
2015	1,359,422	852,045	35,840	13,376	581,410	221,417	106,675	400,701
2016 3	1,206,483	717,002	29,059	7,621	511,222	169,103	73,371	416,108
2017 3	1,047,822	619,199	30,339	8,933	438,463	141,466	66,290	362,332
2018	1,148,091	703,416	38,658	5,673	534,552	124,530	91,179	353,496
2019	1,285,541	783,977	38,984	9,587	607,900	127,504	94,367	407,197
2020 6	1,739,485	776,970	38,948	17,527	643,340	77,155	184,986	777,529
2021 Mar.	181,139	105,661	11,531	9,511	75,893	8,725	11,202	64,277
Apr.	145,418	62,631	4,441	1,000	50,889	6,301	11,673	71,113
May	138,917	58,587	2,131	250	50,439	5,766	15,601	64,729
June	148,673	68,494	1,236	700	57,098	9,460	13,550	66,630
July	144,450	62,560	1,211	250	54,160	6,939	8,872	73,018
Aug.	136,725	67,235	1,340	0	59,379	6,516	11,940	57,550
Sep.	155,004	68,421	4,772	1,250	55,371	7,028	20,916	65,668
Oct.	134,154	61,412	4,207	530	48,932	7,744	8,293	64,449
Nov.	134,401	59,511	2,153	1,000	47,873	8,484	10,897	63,993
	of which: Debt securities with maturities of more than four years 4							
2010	381,687	169,174	15,469	15,139	72,796	65,769	34,649	177,863
2011	368,039	153,309	13,142	8,500	72,985	58,684	41,299	173,431
2012	421,018	177,086	23,374	6,482	74,386	72,845	44,042	199,888
2013	372,805	151,797	16,482	10,007	60,662	64,646	45,244	175,765
2014	420,006	157,720	17,678	8,904	61,674	69,462	56,249	206,037
2015	414,593	179,150	25,337	9,199	62,237	82,379	68,704	166,742
2016 3	375,859	173,900	24,741	5,841	78,859	64,460	47,818	154,144
2017 3	357,506	170,357	22,395	6,447	94,852	46,663	44,891	142,257
2018	375,906	173,995	30,934	4,460	100,539	38,061	69,150	132,760
2019	396,617	174,390	26,832	6,541	96,673	44,346	69,682	152,544
2020 6	536,359	165,146	28,500	7,427	90,889	38,329	78,356	292,857
2021 Mar.	59,203	27,756	6,371	3,161	13,666	4,558	5,800	25,647
Apr.	48,999	12,414	3,051	250	7,001	2,111	7,640	28,945
May	45,302	11,672	2,131	250	6,132	3,159	6,058	27,572
June	47,884	11,296	908	700	5,981	3,707	6,767	29,821
July	37,975	8,800	800	250	5,424	2,326	3,202	25,973
Aug.	33,381	10,632	1,340	0	8,165	1,127	3,457	19,292
Sep.	60,975	18,007	4,400	0	10,365	3,241	12,400	30,568
Oct.	42,898	17,278	3,528	30	11,600	2,121	2,165	23,455
Nov.	34,943	9,444	1,705	500	4,165	3,074	5,667	19,831
	Net sales 5							
2010	21,566	– 87,646	– 3,754	– 63,368	28,296	– 48,822	23,748	85,464
2011	22,518	– 54,582	1,657	– 44,290	32,904	– 44,852	– 3,189	80,289
2012	– 85,298	– 100,198	– 4,177	– 41,660	– 3,259	– 51,099	– 6,401	21,298
2013	– 140,017	– 125,932	– 17,364	– 37,778	– 4,027	– 66,760	1,394	– 15,479
2014	– 34,020	– 56,899	– 6,313	– 23,856	– 862	– 25,869	10,497	12,383
2015	– 65,147	– 77,273	9,271	– 9,754	– 2,758	– 74,028	25,300	– 13,174
2016 3	21,951	10,792	2,176	– 12,979	16,266	5,327	18,177	– 7,020
2017 3	2,669	5,954	6,389	– 4,697	18,788	– 14,525	6,828	– 10,114
2018	2,758	26,648	19,814	– 6,564	18,850	– 5,453	9,738	– 33,630
2019	59,719	28,750	13,098	– 3,728	26,263	– 6,885	30,449	519
2020 6	343,046	26,505	7,861	8,016	22,026	– 11,399	50,316	266,225
2021 Mar.	61,040	37,126	10,737	8,754	15,784	1,850	2,689	21,225
Apr.	9,029	– 2,148	1,114	968	– 4,362	132	4,506	6,671
May	31,324	– 4,344	1,076	– 907	– 3,822	– 691	7,307	28,362
June	16,508	3,561	821	616	– 588	2,712	1,974	10,973
July	6,100	– 5,782	– 41	– 327	– 5,169	– 245	2,088	9,795
Aug.	33,226	6,654	– 1,096	– 92	7,304	539	1,014	25,557
Sep.	18,759	11,684	2,474	65	11,735	– 2,590	10,431	– 3,357
Oct.	8,950	7,116	2,418	– 536	3,831	1,404	527	1,307
Nov.	40,794	6,810	– 2,052	221	6,788	1,853	5,561	28,423

***** For definitions, see the explanatory notes in Statistical Series - Securities Issues Statistics on pages 43 f. **1** Excluding registered bank debt securities. **2** Including cross-border financing within groups from January 2011. **3** Sectoral reclassification of debt securities. **4** Maximum maturity according to the terms of issue. **5** Gross sales less redemptions. **6** Methodological changes since January 2020. — The figures for the year 2020 have been revised. The figures for the most recent date are provisional. Revisions are not specially marked.

VIII. Capital market

3. Amounts outstanding of debt securities issued by residents *

€ million, nominal value

End of year or month/ Maturity in years	Total	Bank debt securities					Corporate bonds (non-MFIs)	Public debt securities
		Total	Mortgage Pfandbriefe	Public Pfandbriefe	Debt securities issued by special-purpose credit institutions	Other bank debt securities		
2009	3,326,635	1,801,029	151,160	296,445	516,221	837,203	227,024	1,298,581
2010	3,348,201	1 1,570,490	147,529	232,954	544,517	1 645,491	250,774	1 1,526,937
2011	3,370,721	1,515,911	149,185	188,663	577,423	600,640	247,585	1,607,226
2012	3,285,422	1 1,414,349	145,007	147,070	574,163	1 548,109	1 220,456	1 1,650,617
2013	3,145,329	1,288,340	127,641	109,290	570,136	481,273	221,851	1,635,138
2014	3,111,308	1,231,445	121,328	85,434	569,409	455,274	232,342	1,647,520
2015	3,046,162	1,154,173	130,598	75,679	566,811	381,085	257,612	1,634,377
2016 1	3,068,111	1,164,965	132,775	62,701	633,578	335,910	275,789	1,627,358
2017 1	3,090,708	1,170,920	141,273	58,004	651,211	320,432	2 302,543	1,617,244
2018	3,091,303	1,194,160	161,088	51,439	670,062	1 311,572	1 2 313,527	1,583,616
2019	2 3,149,373	1,222,911	174,188	47,712	696,325	304,686	2 342,325	1,584,136
2020 4	2 3,411,642	2 1,173,329	183,261	55,192	687,670	2 247,206	2 378,864	1,859,449
2021 Mar.	3,534,797	1,230,263	194,832	62,865	719,370	253,196	388,060	1,916,474
Apr.	3,533,432	1,219,467	195,766	63,790	707,428	252,482	392,063	1,921,902
May	3,562,200	1,212,645	196,850	62,878	701,731	251,186	399,222	1,950,333
June	3,587,728	1,222,221	197,721	63,515	706,439	254,546	401,612	1,963,895
July	3,586,593	1,216,275	197,729	63,186	700,892	254,468	401,308	1,969,010
Aug.	3,620,354	1,223,751	196,656	63,103	708,770	255,222	402,779	1,993,824
Sep.	3,647,554	1,241,988	199,783	63,941	725,213	253,051	413,619	1,991,947
Oct.	3,658,858	1,250,511	202,320	63,409	730,111	254,670	414,009	1,994,338
Nov.	3,706,989	1,262,249	200,382	63,672	740,950	257,246	419,736	2,025,004
Breakdown by remaining period to maturity 3							**Position at end-November 2021**	
bis unter 2	1 196 724	455 914	55 958	25 972	301 044	72 940	75 234	665 576
2 bis unter 4	678 062	294 798	51 676	16 228	174 855	52 039	75 446	307 819
4 bis unter 6	539 177	197 263	39 562	9 048	97 372	51 281	62 012	279 902
6 bis unter 8	367 355	138 131	27 331	7 205	75 721	27 874	43 907	185 317
8 bis unter 10	308 464	78 090	13 515	2 043	42 958	19 574	31 351	199 022
10 bis unter 15	193 092	53 093	8 131	2 331	29 842	12 789	36 025	103 974
15 bis unter 20	114 595	15 963	3 278	681	10 104	1 901	13 542	85 089
20 und darüber	309 521	28 997	932	164	9 054	18 848	82 219	198 304

***** Including debt securities temporarily held in the issuers' portfolios. **1** Sectoral reclassification of debt securities. **2** Adjustments due to the change in the country of residence of the issuers or debt securities. **3** Calculated from month under review until final maturity for debt securities falling due en bloc and until mean maturity of the residual amount outstanding for debt securities not falling due en bloc. **4** Methodological changes since January 2020. — The figures for the year 2020 have been revised. The figures for the most recent date are provisional. Revisions are not specially marked.

4. Shares in circulation issued by residents *

€ million, nominal value

Period	Share capital = circulation at end of period under review	Net increase or net decrease (-) during period under review	Change in domestic public limited companies' capital due to						Memo item: Share circulation at market values (market capitalisation) level at end of period under review 2
			cash payments and exchange of convertible bonds 1	issue of bonus shares	contribution of claims and other real assets	merger and transfer of assets	change of legal form	reduction of capital and liquidation	
2009	175,691	6,989	12,476	398	97	– 3,741	– 1,269	– 974	927,256
2010	174,596	– 1,096	3,265	497	178	– 486	– 993	– 3,569	1,091,220
2011	177,167	2,570	6,390	552	462	– 552	– 762	– 3,532	924,214
2012	178,617	1,449	3,046	129	570	– 478	594	– 2,411	1,150,188
2013	171,741	– 6,879	2,971	718	476	– 1,432	– 619	– 8,992	1,432,658
2014	177,097	5,356	5,332	1,265	1,714	– 465	– 1,044	– 1,446	1,478,063
2015	177,416	319	4,634	397	599	– 1,394	– 1,385	– 2,535	1,614,442
2016	176,355	– 1,062	3,272	319	337	– 953	– 2,165	– 1,865	1,676,397
2017	178,828	2,471	3,894	776	533	– 457	– 661	– 1,615	1,933,733
2018	180,187	1,357	3,670	716	82	– 1,055	– 1,111	– 946	1,634,155
2019 3 4	183,461	1,700	2,411	2,419	542	– 858	– 65	– 2,747	1,950,224
2020 4	181,881	– 2,871	1,877	219	178	– 2,051	– 460	– 2,634	1,963,588
2021 Mar.	182,362	213	411	–	0	– 1	– 34	– 164	2,174,997
Apr.	182,665	106	116	73	1	– 0	– 1	– 84	2,194,286
May	182,152	– 514	205	26	–	– 0	– 92	– 653	2,228,053
June	182,226	75	275	73	–	– 87	– 70	– 116	2,262,394
July	181,614	– 65	74	31	2	– 1	– 2	– 169	2,266,494
Aug.	186,083	4,425	4,593	171	11	70	– 4	– 416	2,323,588
Sep.	186,316	230	678	6	11	– 14	– 9	– 443	2,238,994
Oct.	188,444	2,127	2,166	16	–	– 4	– 35	– 16	2,267,343
Nov.	188,352	– 109	85	–	6	– 5	– 1	– 194	2,198,231

***** Excluding shares of public limited investment companies. **1** Including shares issued out of company profits. **2** All marketplaces. Source: Bundesbank calculations based on data of the Herausgebergemeinschaft Wertpapier-Mit teilungen and Deutsche Börse AG. **3** Methodological changes since October 2019. **4** Changes due to statistical adjustments.

VIII. Capital market

5. Yields and indices on German securities

Period	Yields on debt securities outstanding issued by residents [1]							Price indices [2,3]			
		Public debt securities			Bank debt securities			Debt securities		Shares	
			Listed Federal securities								
	Total	Total	Total	With a residual maturity of 9 to 10 years [4]	Total	With a residual maturity of more than 9 years and up to 10 years	Corporate bonds (non-MFIs)	German bond index (REX)	iBoxx € Germany price index	CDAX share price index	German share index (DAX)
	% per annum							Average daily rate	End-1998 = 100	End-1987 = 100	End-1987 = 1,000
2009	3.2	3.1	3.0	3.2	3.5	4.0	5.5	123.62	100.12	320.32	5,957.43
2010	2.5	2.4	2.4	2.7	2.7	3.3	4.0	124.96	102.95	368.72	6,914.19
2011	2.6	2.4	2.4	2.6	2.9	3.5	4.3	131.48	109.53	304.60	5,898.35
2012	1.4	1.3	1.3	1.5	1.6	2.1	3.7	135.11	111.18	380.03	7,612.39
2013	1.3	1.3	1.3	1.6	1.3	2.1	3.4	132.11	105.92	466.53	9,552.16
2014	1.0	1.0	1.0	1.2	0.9	1.7	2.9	139.68	114.37	468.39	9,805.55
2015	0.5	0.4	0.4	0.5	0.5	1.2	2.4	139.52	112.42	508.80	10,743.01
2016	0.1	0.0	0.0	0.1	0.3	1.0	2.1	142.50	112.72	526.55	11,481.06
2017	0.3	0.2	0.2	0.3	0.4	0.9	1.7	140.53	109.03	595.45	12,917.64
2018	0.4	0.3	0.3	0.4	0.6	1.0	2.5	141.84	109.71	474.85	10,558.96
2019	– 0.1	– 0.2	– 0.3	– 0.3	0.1	0.3	2.5	143.72	111.32	575.80	13,249.01
2020	– 0.2	– 0.4	– 0.5	– 0.5	– 0.0	0.1	1.7	146.15	113.14	586.72	13,718.78
2021 July	– 0.2	– 0.3	– 0.4	– 0.5	– 0.1	0.1	0.9	146.34	111.03	650.36	15,544.39
Aug.	– 0.3	– 0.4	– 0.5	– 0.5	– 0.2	– 0.0	0.7	145.90	110.25	662.93	15,835.09
Sep.	– 0.1	– 0.3	– 0.4	– 0.4	– 0.1	0.2	0.9	144.41	108.60	638.37	15,260.69
Oct.	0.0	– 0.2	– 0.2	– 0.2	0.1	0.3	1.0	143.52	108.60	653.37	15,688.77
Nov.	– 0.1	– 0.3	– 0.4	– 0.3	0.1	0.3	1.0	145.58	110.72	627.49	15,100.13
Dec.	– 0.1	– 0.3	– 0.4	– 0.4	0.1	0.2	1.0	144.23	108.88	654.20	15,884.86

1 Bearer debt securities with maximum maturities according to the terms of issue of over 4 years. Structured debt securities, debt securities with unscheduled redemption, zero coupon bonds, floating rate notes and bonds not denominated in Euro are not included. Group yields for the various categories of securities are weighted by the amounts outstanding of the debt securities included in the calculation. Monthly figures are calculated on the basis of the yields on all the business days in a month. The annual figures are the unweighted means of the monthly figures. Adjustment of the scope of securities included on 1 May 2020. **2** End of year or month. **3** Source: Deutsche Börse AG. **4** Only debt securities eligible as underlying instruments for futures contracts; calculated as unweighted averages.

6. Sales and purchases of mutual fund shares in Germany

€ million

Period	Sales								Purchases					
		Open-end domestic mutual funds [1] (sales receipts)							Residents					
			Mutual funds open to the general public							Credit institutions including building and loan associations [2]		Other sectors [3]		
				of which:										
	Sales = total purchases	Total	Total	Money market funds	Securities-based funds	Real estate funds	Specialised funds	Foreign funds [4]	Total	Total	of which: Foreign mutual fund shares	Total	of which: Foreign mutual fund shares	Non-residents [5]
2009	49,929	43,747	10,966	– 5,047	11,749	2,686	32,780	6,182	38,132	– 14,995	– 8,178	53,127	14,361	11,796
2010	106,190	84,906	13,381	– 148	8,683	1,897	71,345	21,284	102,591	3,873	6,290	98,718	14,994	3,598
2011	46,512	45,221	– 1,340	– 379	– 2,037	1,562	46,561	1,290	39,474	– 7,576	– 694	47,050	1,984	7,035
2012	111,236	89,942	2,084	– 1,036	97	3,450	87,859	21,293	114,676	– 3,062	– 1,562	117,738	22,855	– 3,437
2013	123,736	91,337	9,184	– 574	5,596	3,376	82,153	32,400	117,028	771	100	116,257	32,300	6,710
2014	140,233	97,711	3,998	– 473	862	1,000	93,713	42,521	144,075	819	– 1,745	143,256	44,266	– 3,840
2015	181,889	146,136	30,420	318	22,345	3,636	115,716	35,753	174,018	7,362	494	166,656	35,259	7,871
2016	156,985	119,369	21,301	– 342	11,131	7,384	98,068	37,615	163,934	2,877	– 3,172	161,057	40,787	– 6,947
2017	153,756	94,921	29,560	– 235	21,970	4,406	65,361	58,834	156,282	4,938	1,048	151,344	57,786	– 2,526
2018	132,060	103,694	15,279	377	4,166	6,168	88,415	28,366	138,424	2,979	– 2,306	135,445	30,672	– 6,364
2019	176,465	122,546	17,032	– 447	5,097	10,580	105,514	53,919	181,388	2,719	– 812	178,669	54,731	– 4,923
2020	180,462	116,028	19,193	– 42	11,343	8,795	96,835	64,435	179,529	336	– 1,656	179,193	66,091	933
2021 May	12,788	7,912	3,416	– 19	2,585	679	4,496	4,875	12,496	1,460	5	11,036	4,870	292
June	23,101	12,411	3,231	78	2,252	757	9,181	10,690	23,929	733	446	23,196	10,244	– 827
July	16,945	11,842	4,098	– 82	3,506	503	7,744	5,103	17,731	1,051	– 477	16,680	5,580	– 786
Aug.	16,774	8,078	3,673	– 6	3,086	445	4,405	8,695	17,239	1,024	– 68	16,215	8,763	– 466
Sep.	13,661	5,145	2,414	– 52	1,696	673	2,731	8,516	13,508	265	9	13,243	8,507	154
Oct.	30,703	20,211	4,435	6	3,507	451	15,775	10,492	31,243	1,775	– 191	29,468	10,683	– 540
Nov.	28,974	13,176	3,779	– 68	3,006	651	9,398	15,798	29,929	1,729	632	28,200	15,166	– 955

1 Including public limited investment companies. **2** Book values. **3** Residual. **4** Net purchases or net sales (-) of foreign fund shares by residents; transaction values. **5** Net purchases or net sales (-) of domestic fund shares by non-residents; transaction values. — The figures for the most recent date are provisional; revisions are not specially marked.

IX. Financial accounts

1. Acquisition of financial assets and external financing of non-financial corporations (non-consolidated)

€ billion

Item	2018	2019	2020	2020			2021		
				Q2	Q3	Q4	Q1	Q2	Q3
Acquisition of financial assets									
Currency and deposits	25.63	18.26	100.01	46.79	45.71	6.78	19.68	– 24.65	20.31
Debt securities	5.22	– 2.18	2.99	2.47	0.57	– 0.20	– 1.53	1.90	1.57
Short-term debt securities	1.42	– 1.31	1.27	0.53	1.25	– 0.18	0.12	0.77	0.26
Long-term debt securities	3.81	– 0.87	1.72	1.94	– 0.68	– 0.02	– 1.65	1.13	1.32
Memo item:									
Debt securities of domestic sectors	0.64	– 0.47	1.38	1.80	– 0.48	0.10	– 0.64	0.87	1.75
Non-financial corporations	0.58	0.51	– 0.17	0.20	0.13	– 0.48	0.10	0.62	0.59
Financial corporations	1.39	– 0.56	0.12	0.60	– 0.41	0.09	– 0.55	0.48	0.58
General government	– 1.34	– 0.41	1.44	1.00	– 0.20	0.49	– 0.20	– 0.24	0.58
Debt securities of the rest of the world	4.59	– 1.71	1.61	0.67	1.05	– 0.31	– 0.88	1.03	– 0.18
Loans	– 0.87	– 2.76	– 19.33	– 3.19	– 7.81	– 0.27	3.96	8.72	25.16
Short-term loans	24.05	12.37	– 8.52	– 2.83	0.49	3.22	– 0.20	11.24	16.57
Long-term loans	– 24.92	– 15.13	– 10.82	– 0.35	– 8.30	– 3.50	4.16	– 2.52	8.59
Memo item:									
Loans to domestic sectors	6.25	– 25.00	0.28	6.99	– 3.13	4.24	– 5.83	0.43	0.60
Non-financial corporations	4.52	– 28.14	– 12.27	5.75	– 3.86	– 4.90	– 1.66	– 3.40	– 1.21
Financial corporations	1.36	2.90	11.99	1.11	0.59	9.00	– 4.17	3.84	1.81
General government	0.36	0.24	0.55	0.14	0.14	0.14	0.00	0.00	0.00
Loans to the rest of the world	– 7.12	22.24	– 19.61	– 10.18	– 4.68	– 4.52	9.79	8.29	24.56
Equity and investment fund shares	130.37	108.78	103.43	– 2.88	36.62	11.19	23.17	13.47	21.36
Equity	128.36	99.77	90.65	– 4.03	31.75	5.27	19.34	6.55	18.65
Listed shares of domestic sectors	18.54	6.18	– 77.97	– 18.72	10.02	– 67.75	12.08	4.92	– 18.27
Non-financial corporations	17.99	4.62	– 78.06	– 18.55	10.15	– 68.34	12.08	5.32	– 18.80
Financial corporations	0.55	1.55	0.09	– 0.18	– 0.14	0.60	0.01	– 0.41	0.54
Listed shares of the rest of the world	– 4.08	7.26	6.63	– 1.28	3.56	4.09	0.72	12.10	5.66
Other equity [1]	113.90	86.34	161.98	15.97	18.18	68.93	6.54	– 10.47	31.26
Investment fund shares	2.01	9.00	12.78	1.15	4.87	5.91	3.83	6.92	2.72
Money market fund shares	– 0.53	1.78	3.79	0.98	3.27	1.34	– 0.47	– 0.19	– 0.41
Non-MMF investment fund shares	2.54	7.22	8.99	0.17	1.60	4.57	4.31	7.11	3.13
Insurance technical reserves	0.39	1.68	2.02	0.50	0.45	0.55	0.43	0.61	0.65
Financial derivatives	1.99	– 0.62	– 27.51	– 10.75	– 4.12	– 11.29	14.11	2.44	– 2.26
Other accounts receivable	37.96	– 58.43	48.12	– 54.64	46.91	46.22	25.99	– 4.16	13.91
Total	200.69	64.72	209.72	– 21.70	118.34	52.97	85.82	– 1.68	80.71
External financing									
Debt securities	0.47	20.52	36.63	23.36	10.58	– 4.01	2.67	8.92	10.34
Short-term securities	3.38	4.88	– 4.40	2.76	– 3.91	– 5.42	– 1.19	1.23	3.50
Long-term securities	– 2.91	15.64	41.02	20.60	14.49	1.41	3.86	7.69	6.84
Memo item:									
Debt securities of domestic sectors	3.46	6.62	18.12	11.47	5.05	0.06	1.96	3.29	2.14
Non-financial corporations	0.58	0.51	– 0.17	0.20	0.13	– 0.48	0.10	0.62	0.59
Financial corporations	2.88	5.31	19.86	11.20	5.44	1.18	1.98	2.75	1.78
General government	0.01	0.47	– 0.22	– 0.19	0.05	0.01	0.14	0.03	0.02
Households	– 0.01	0.34	– 1.35	0.26	– 0.57	– 0.65	– 0.26	– 0.12	– 0.26
Debt securities of the rest of the world	– 2.99	13.90	18.51	11.89	5.53	– 4.06	0.71	5.63	8.20
Loans	149.42	71.99	69.86	29.91	– 0.56	3.66	30.34	6.99	24.39
Short-term loans	72.89	24.12	– 17.46	– 27.12	– 0.82	– 4.47	33.80	– 2.07	13.00
Long-term loans	76.53	47.86	87.32	57.03	0.26	8.12	– 3.46	9.06	11.39
Memo item:									
Loans from domestic sectors	75.48	27.59	30.38	25.26	– 4.55	– 1.45	38.24	– 10.53	7.91
Non-financial corporations	4.52	– 28.14	– 12.27	5.75	– 3.86	– 4.90	– 1.66	– 3.40	– 1.21
Financial corporations	69.55	55.16	6.95	3.07	– 11.66	– 8.31	36.89	– 12.43	6.01
General government	1.41	0.57	35.70	16.45	10.97	11.76	3.01	5.30	3.11
Loans from the rest of the world	73.94	44.39	39.48	4.64	3.99	5.11	– 7.90	17.51	16.48
Equity	16.08	17.96	56.49	9.74	21.58	19.10	14.52	8.00	29.06
Listed shares of domestic sectors	73.05	– 24.76	– 62.25	– 13.51	10.80	– 66.70	15.27	8.02	– 21.41
Non-financial corporations	17.99	4.62	– 78.06	– 18.55	10.15	– 68.34	12.08	5.32	– 18.80
Financial corporations	46.83	– 33.41	3.47	1.46	– 1.01	1.40	0.02	1.52	– 3.24
General government	0.53	– 0.01	0.26	0.09	– 0.01	– 0.01	– 0.07	– 0.07	– 0.00
Households	7.70	4.03	12.08	3.50	1.67	0.25	3.25	1.25	0.64
Listed shares of the rest of the world	– 31.77	– 1.31	12.70	18.37	– 1.32	1.56	– 5.02	– 0.66	35.77
Other equity [1]	– 25.20	44.04	106.03	4.87	12.10	84.24	4.27	0.65	14.70
Insurance technical reserves	6.08	7.55	5.84	1.46	1.46	1.46	1.46	1.46	1.46
Financial derivatives and employee stock options	– 0.49	– 1.38	0.54	– 2.26	0.06	1.26	1.27	8.20	6.58
Other accounts payable	55.00	7.43	15.62	– 44.73	39.91	22.74	53.86	13.41	32.79
Total	226.55	124.07	184.97	17.48	73.02	44.21	104.12	46.97	104.61

1 Including unlisted shares.

IX. Financial accounts

2. Financial assets and liabilities of non-financial corporations (non-consolidated)

End of year/quarter; € billion

Item	2018	2019	2020	2020			2021		
				Q2	Q3	Q4	Q1	Q2	Q3
Financial assets									
Currency and deposits	582.4	573.7	715.2	626.2	698.1	715.2	709.2	689.7	703.2
Debt securities	50.8	49.6	51.5	51.5	51.5	51.5	49.9	51.9	53.5
Short-term debt securities	4.9	3.7	4.8	3.8	5.1	4.8	5.0	5.9	6.2
Long-term debt securities	45.9	45.9	46.7	47.7	46.3	46.7	44.9	46.0	47.3
Memo item:									
Debt securities of domestic sectors	21.3	21.1	22.1	22.3	21.9	22.1	21.4	22.3	24.0
Non-financial corporations	4.5	5.0	4.7	5.0	5.1	4.7	4.7	5.3	5.9
Financial corporations	13.8	13.6	13.4	13.6	13.2	13.4	12.9	13.4	14.0
General government	3.0	2.6	4.0	3.7	3.5	4.0	3.8	3.6	4.1
Debt securities of the rest of the world	29.5	28.4	29.4	29.2	29.6	29.4	28.5	29.6	29.5
Loans	733.8	733.4	717.0	728.7	718.5	717.0	722.4	730.8	756.8
Short-term loans	555.6	569.4	565.8	564.4	563.2	565.8	565.9	577.1	594.4
Long-term loans	178.2	164.0	151.2	164.4	155.2	151.2	156.5	153.7	162.4
Memo item:									
Loans to domestic sectors	440.3	415.3	415.6	414.4	411.3	415.6	409.7	410.2	410.8
Non-financial corporations	368.0	339.9	327.6	336.4	332.5	327.6	325.9	322.5	321.3
Financial corporations	65.2	68.1	80.1	70.5	71.1	80.1	75.9	79.7	81.5
General government	7.1	7.3	7.9	7.6	7.7	7.9	7.9	7.9	7.9
Loans to the rest of the world	293.6	318.1	301.5	314.3	307.2	301.5	312.7	320.7	346.1
Equity and investment fund shares	2,221.8	2,434.0	2,514.5	2,401.1	2,443.0	2,514.5	2,660.3	2,735.8	2,781.5
Equity	2,055.4	2,244.0	2,309.8	2,214.5	2,249.5	2,309.8	2,447.9	2,511.7	2,554.1
Listed shares of domestic sectors	302.6	342.0	307.0	337.2	352.5	307.0	359.4	383.5	371.5
Non-financial corporations	296.0	332.9	298.9	329.6	346.0	298.9	350.9	375.0	361.7
Financial corporations	6.6	9.0	8.1	7.6	6.5	8.1	8.5	8.5	9.8
Listed shares of the rest of the world	39.9	52.2	68.1	48.5	56.5	68.1	72.5	83.9	86.6
Other equity [1]	1,713.0	1,849.8	1,934.7	1,828.8	1,840.5	1,934.7	2,016.0	2,044.2	2,096.1
Investment fund shares	166.4	190.0	204.7	186.6	193.5	204.7	212.4	224.1	227.4
Money market fund shares	1.0	3.2	7.0	2.4	5.7	7.0	6.5	6.3	5.9
Non-MMF investment fund shares	165.4	186.8	197.7	184.2	187.8	197.7	205.9	217.8	221.5
Insurance technical reserves	56.3	59.2	62.1	60.6	61.3	62.1	62.8	63.6	64.1
Financial derivatives	33.3	31.6	31.1	34.8	29.7	31.1	31.4	52.0	106.5
Other accounts receivable	1,171.1	1,246.6	1,227.9	1,125.5	1,186.0	1,227.9	1,334.9	1,323.5	1,370.7
Total	4,849.6	5,127.9	5,319.3	5,028.5	5,188.0	5,319.3	5,570.9	5,647.2	5,836.3
Liabilities									
Debt securities	181.3	204.7	249.6	238.6	251.8	249.6	251.1	261.0	255.1
Short-term securities	6.8	11.9	7.1	16.6	12.6	7.1	5.9	7.2	10.6
Long-term securities	174.5	192.9	242.5	222.0	239.2	242.5	245.2	253.8	244.5
Memo item:									
Debt securities of domestic sectors	70.1	77.7	96.0	88.8	94.9	96.0	95.6	99.6	99.7
Non-financial corporations	4.5	5.0	4.7	5.0	5.1	4.7	4.7	5.3	5.9
Financial corporations	51.5	57.8	78.1	69.7	76.1	78.1	78.0	81.2	81.2
General government	0.1	0.6	0.4	0.3	0.4	0.4	0.5	0.5	0.5
Households	14.0	14.4	12.8	13.8	13.3	12.8	12.5	12.5	12.1
Debt securities of the rest of the world	111.1	127.0	153.6	149.9	156.9	153.6	155.5	161.4	155.4
Loans	2,093.6	2,178.0	2,236.5	2,242.0	2,237.6	2,236.5	2,270.0	2,272.3	2,304.2
Short-term loans	804.6	831.9	808.6	818.1	814.8	808.6	844.9	842.3	855.8
Long-term loans	1,289.0	1,346.1	1,427.9	1,423.9	1,422.8	1,427.9	1,425.0	1,430.0	1,448.4
Memo item:									
Loans from domestic sectors	1,321.1	1,360.2	1,387.2	1,394.9	1,390.5	1,387.2	1,429.5	1,416.5	1,425.2
Non-financial corporations	368.0	339.9	327.6	336.4	332.5	327.6	325.9	322.5	321.3
Financial corporations	903.6	970.1	972.3	994.3	982.6	972.3	1,013.7	998.8	1,005.6
General government	49.5	50.3	87.3	64.3	75.4	87.3	89.8	95.1	98.2
Loans from the rest of the world	772.5	817.8	849.3	847.1	847.1	849.3	840.5	855.8	879.1
Equity	2,701.1	3,102.2	3,259.8	2,950.1	3,092.2	3,259.8	3,521.3	3,638.1	3,643.4
Listed shares of domestic sectors	660.1	734.1	739.9	711.3	747.4	739.9	848.8	896.0	882.1
Non-financial corporations	296.0	332.9	298.9	329.6	346.0	298.9	350.9	375.0	361.7
Financial corporations	162.6	158.0	171.9	150.5	156.1	171.9	193.0	202.9	196.9
General government	41.6	51.8	56.3	50.5	53.3	56.3	67.3	71.8	70.6
Households	159.8	191.3	212.8	180.8	192.0	212.8	237.6	246.3	252.9
Listed shares of the rest of the world	764.0	958.6	995.6	855.9	923.5	995.6	1,081.5	1,125.8	1,119.5
Other equity [1]	1,277.0	1,409.6	1,524.3	1,382.9	1,421.3	1,524.3	1,591.1	1,616.3	1,641.7
Insurance technical reserves	269.8	277.3	283.1	280.2	281.7	283.1	284.6	286.1	287.5
Financial derivatives and employee stock options	65.8	68.8	83.3	88.8	81.3	83.3	67.6	76.9	129.2
Other accounts payable	1,189.4	1,298.5	1,277.7	1,221.3	1,267.8	1,277.7	1,375.8	1,361.1	1,443.9
Total	6,500.9	7,129.5	7,390.0	7,021.1	7,212.4	7,390.0	7,770.3	7,895.4	8,063.3

1 Including unlisted shares.

IX. Financial accounts

3. Acquisition of financial assets and external financing of households (non-consolidated)

€ billion

Item	2018	2019	2020	2020			2021		
				Q2	Q3	Q4	Q1	Q2	Q3
Acquisition of financial assets									
Currency and deposits	137.95	142.20	210.03	73.09	41.50	74.44	48.52	52.42	11.11
Currency	29.92	35.19	61.65	16.99	11.97	16.29	12.96	17.10	14.59
Deposits	108.03	107.01	148.38	56.10	29.53	58.15	35.57	35.32	– 3.48
Transferable deposits	109.88	111.01	165.34	58.64	31.76	56.20	34.10	37.70	2.69
Time deposits	6.78	1.47	– 1.70	– 0.85	0.41	1.85	– 0.01	– 2.37	– 4.36
Savings deposits (including savings certificates)	– 8.63	– 5.47	– 15.26	– 1.70	– 2.63	0.10	1.48	– 0.01	– 1.81
Debt securities	1.55	– 1.85	– 5.94	0.38	– 1.67	– 3.18	– 2.66	– 1.30	– 1.32
Short-term debt securities	– 0.13	– 0.53	0.08	0.16	0.10	– 0.16	0.16	0.22	– 0.10
Long-term debt securities	1.69	– 1.33	– 6.02	0.22	– 1.77	– 3.03	– 2.82	– 1.52	– 1.22
Memo item:									
Debt securities of domestic sectors	2.20	– 2.93	– 2.56	0.55	– 1.17	– 1.79	– 1.07	– 1.26	– 0.99
Non-financial corporations	– 0.10	0.21	– 1.32	0.19	– 0.56	– 0.62	– 0.28	– 0.13	– 0.25
Financial corporations	2.77	– 2.22	– 1.26	0.47	– 0.36	– 1.02	– 0.67	– 1.02	– 0.66
General government	– 0.47	– 0.92	0.02	– 0.11	– 0.24	– 0.15	– 0.12	– 0.11	– 0.08
Debt securities of the rest of the world	– 0.65	1.08	– 3.38	– 0.17	– 0.50	– 1.39	– 1.59	– 0.05	– 0.32
Equity and investment fund shares	38.48	49.75	90.18	28.96	20.35	21.48	28.09	31.66	34.60
Equity	18.90	18.90	48.53	15.57	11.60	7.73	2.60	7.28	7.52
Listed shares of domestic sectors	9.45	6.60	16.05	6.35	1.98	– 0.35	3.39	2.20	2.35
Non-financial corporations	6.29	3.52	11.92	3.41	1.71	0.33	3.12	1.58	1.83
Financial corporations	3.16	3.08	4.14	2.94	0.27	– 0.68	0.27	0.62	0.52
Listed shares of the rest of the world	4.41	7.45	23.28	6.40	7.43	6.43	– 1.72	3.54	3.72
Other equity [1]	5.04	4.86	9.19	2.82	2.20	1.64	0.92	1.54	1.45
Investment fund shares	19.59	30.84	41.65	13.39	8.75	13.75	25.50	24.38	27.09
Money market fund shares	– 0.22	– 0.32	0.09	– 0.10	0.10	– 0.29	0.09	– 0.07	– 0.01
Non-MMF investment fund shares	19.80	31.17	41.56	13.49	8.65	14.04	25.41	24.46	27.10
Non-life insurance technical reserves and provision for calls under standardised guarantees	15.80	17.95	18.34	5.54	5.57	1.73	5.40	5.58	3.73
Life insurance and annuity entitlements	28.22	37.85	47.96	8.83	9.49	13.12	15.86	10.46	12.88
Pension entitlement, claims of pension funds on pension managers, entitlements to non-pension benefits	37.28	37.31	33.75	7.12	7.18	9.79	6.01	4.34	3.32
Financial derivatives and employee stock options	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other accounts receivable [2]	– 12.81	– 10.38	– 7.48	– 13.31	3.65	– 16.68	22.02	– 2.28	11.00
Total	246.47	272.82	386.84	110.61	86.07	100.69	123.25	100.87	75.32
External financing									
Loans	64.87	82.50	83.95	18.57	27.42	25.15	16.79	27.56	30.71
Short-term loans	2.45	0.95	– 5.50	– 2.29	– 0.53	– 1.11	0.48	0.79	1.21
Long-term loans	62.43	81.55	89.45	20.86	27.94	26.26	16.31	26.77	29.49
Memo item:									
Mortgage loans	53.88	68.51	85.73	19.41	25.43	25.51	18.75	26.57	29.37
Consumer loans	11.14	14.42	– 4.29	– 2.05	1.08	– 0.66	– 1.14	– 0.09	2.38
Entrepreneurial loans	– 0.14	– 0.43	2.51	1.21	0.91	0.29	– 0.82	1.08	– 1.04
Memo item:									
Loans from monetary financial institutions	61.72	73.41	83.17	17.96	27.32	22.37	14.85	27.19	28.38
Loans from other financial institutions	3.14	9.06	0.78	0.61	0.10	2.77	1.94	0.37	2.34
Loans from general government and rest of the world	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Financial derivatives	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other accounts payable	0.80	0.73	0.01	0.25	0.32	– 0.38	0.01	0.01	0.25
Total	65.67	83.23	83.97	18.82	27.73	24.77	16.80	27.57	30.96

1 Including unlisted shares. **2** Including accumulated interest-bearing surplus shares with insurance corporations.

IX. Financial accounts

4. Financial assets and liabilities of households (non-consolidated)

End of year/quarter; € billion

Item	2018	2019	2020	2020			2021		
				Q2	Q3	Q4	Q1	Q2	Q3
Financial assets									
Currency and deposits	2,457.4	2,599.6	2,809.3	2,693.7	2,734.9	2,809.3	2,858.0	2,910.4	2,920.7
Currency	227.3	262.5	324.2	295.9	307.9	324.2	337.1	354.2	368.8
Deposits	2,230.1	2,337.1	2,485.2	2,397.8	2,427.0	2,485.2	2,520.9	2,556.2	2,551.9
Transferable deposits	1,398.0	1,509.1	1,674.1	1,586.4	1,617.9	1,674.1	1,708.3	1,746.0	1,748.1
Time deposits	252.4	253.9	252.1	249.9	250.3	252.1	252.2	249.8	245.3
Savings deposits (including savings certificates)	579.7	574.2	558.9	561.5	558.8	558.9	560.4	560.4	558.6
Debt securities	117.5	121.4	113.3	114.5	113.7	113.3	112.8	111.6	110.0
Short-term debt securities	2.1	1.6	1.6	1.7	1.8	1.6	1.7	1.9	1.8
Long-term debt securities	115.4	119.8	111.7	112.8	111.9	111.7	111.0	109.7	108.2
Memo item:									
Debt securities of domestic sectors	80.2	81.5	76.7	76.7	76.1	76.7	77.3	76.5	75.3
Non-financial corporations	12.1	12.4	10.9	11.8	11.3	10.9	10.5	10.5	10.2
Financial corporations	64.6	66.6	63.3	62.0	62.1	63.3	64.4	63.7	62.9
General government	3.4	2.5	2.6	3.0	2.7	2.6	2.4	2.3	2.2
Debt securities of the rest of the world	37.4	39.9	36.5	37.8	37.6	36.5	35.4	35.1	34.7
Equity and investment fund shares	1,164.0	1,388.3	1,541.0	1,376.2	1,425.4	1,541.0	1,659.4	1,746.3	1,790.8
Equity	590.6	708.0	806.4	710.3	737.8	806.4	868.6	904.8	920.5
Listed shares of domestic sectors	184.1	223.9	243.3	209.2	217.3	243.3	271.7	280.0	286.8
Non-financial corporations	151.9	182.3	204.0	172.3	183.6	204.0	228.2	236.9	244.1
Financial corporations	32.2	41.6	39.2	36.9	33.7	39.2	43.4	43.1	42.7
Listed shares of the rest of the world	100.2	136.3	180.6	144.7	156.1	180.6	199.5	216.5	221.1
Other equity [1]	306.3	347.8	382.6	356.4	364.4	382.6	397.4	408.2	412.7
Investment fund shares	573.4	680.2	734.6	665.9	687.7	734.6	790.7	841.5	870.2
Money market fund shares	2.4	2.3	2.3	2.7	2.7	2.3	2.4	2.3	2.3
Non-MMF investment fund shares	571.1	678.0	732.2	663.2	684.9	732.2	788.3	839.2	867.9
Non-life insurance technical reserves and provision for calls under standardised guarantees	375.9	393.8	412.2	404.9	410.5	412.2	417.6	423.2	426.9
Life insurance and annuity entitlements	1,011.1	1,069.1	1,112.1	1,091.6	1,101.2	1,112.1	1,128.0	1,138.7	1,151.6
Pension entitlement, claims of pension funds on pension managers, entitlements to non-pension benefits	883.8	924.5	956.8	945.3	953.2	956.8	962.8	967.2	970.5
Financial derivatives and employee stock options	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other accounts receivable [2]	29.6	29.6	27.9	29.6	30.0	27.9	27.8	28.2	28.5
Total	6,039.4	6,526.4	6,972.6	6,655.8	6,768.9	6,972.6	7,166.4	7,325.6	7,398.9
Liabilities									
Loans	1,754.8	1,837.9	1,924.6	1,870.3	1,899.0	1,924.6	1,939.7	1,969.5	2,000.6
Short-term loans	58.3	59.0	53.2	55.1	54.3	53.2	53.6	54.4	55.6
Long-term loans	1,696.5	1,778.9	1,871.3	1,815.3	1,844.7	1,871.3	1,886.1	1,915.2	1,945.0
Memo item:									
Mortgage loans	1,287.0	1,358.7	1,448.2	1,396.2	1,422.6	1,448.2	1,464.9	1,493.9	1,523.1
Consumer loans	218.1	231.4	226.1	226.0	227.0	226.1	224.6	224.4	226.7
Entrepreneurial loans	249.7	247.7	250.2	248.1	249.5	250.2	250.2	251.2	250.8
Memo item:									
Loans from monetary financial institutions	1,667.2	1,741.6	1,824.6	1,773.2	1,801.6	1,824.6	1,839.8	1,867.3	1,896.1
Loans from other financial institutions	87.5	96.1	99.8	97.1	97.3	99.8	99.7	102.1	104.3
Loans from general government and rest of the world	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial derivatives	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other accounts payable	18.3	19.7	19.2	21.6	21.2	19.2	20.5	19.4	19.2
Total	1,773.1	1,857.6	1,943.8	1,891.9	1,920.2	1,943.8	1,960.2	1,988.9	2,019.8

1 Including unlisted shares. **2** Including accumulated interest-bearing surplus shares with insurance corporations.

X. Public finances in Germany

1. General government: deficit/surplus and debt level as defined in the Maastricht Treaty

Period	General government	Central government	State government	Local government	Social security funds	General government	Central government	State government	Local government	Social security funds
	€ billion					As a percentage of GDP				
	Deficit/surplus[1]									
2015	+ 29.1	+ 17.6	+ 4.6	+ 3.7	+ 3.2	+ 1.0	+ 0.6	+ 0.2	+ 0.1	+ 0.1
2016	+ 36.4	+ 13.7	+ 7.7	+ 6.3	+ 8.7	+ 1.2	+ 0.4	+ 0.2	+ 0.2	+ 0.3
2017	+ 43.7	+ 7.9	+ 13.9	+ 10.7	+ 11.1	+ 1.3	+ 0.2	+ 0.4	+ 0.3	+ 0.3
2018 **p**	+ 64.4	+ 21.1	+ 11.7	+ 15.6	+ 16.0	+ 1.9	+ 0.6	+ 0.3	+ 0.5	+ 0.5
2019 **p**	+ 51.1	+ 22.0	+ 13.8	+ 6.1	+ 9.1	+ 1.5	+ 0.6	+ 0.4	+ 0.2	+ 0.3
2020 **p**	– 145.2	– 86.4	– 30.1	+ 6.3	– 35.0	– 4.3	– 2.6	– 0.9	+ 0.2	– 1.0
2021 **pe**	– 153.9	– 155.3	– 1.6	+ 3.1	– 0.1	– 4.3	– 4.4	– 0.0	+ 0.1	– 0.0
2019 H1 **p**	+ 47.0	+ 18.9	+ 12.8	+ 6.8	+ 8.4	+ 2.8	+ 1.1	+ 0.8	+ 0.4	+ 0.5
H2 **p**	+ 4.1	+ 3.1	+ 1.0	– 0.7	+ 0.7	+ 0.2	+ 0.2	+ 0.1	– 0.0	+ 0.0
2020 H1 **p**	– 47.8	– 26.9	– 9.2	+ 0.8	– 12.5	– 2.9	– 1.6	– 0.6	+ 0.0	– 0.8
H2 **p**	– 97.4	– 59.5	– 20.9	+ 5.5	– 22.5	– 5.6	– 3.4	– 1.2	+ 0.3	– 1.3
2021 H1 **pe**	– 76.1	– 62.0	– 2.8	+ 1.5	– 12.7	– 4.4	– 3.6	– 0.2	+ 0.1	– 0.7
	Debt level[2]									End of year or quarter
2015	2,178.1	1,372.2	659.5	164.0	1.5	72.0	45.3	21.8	5.4	0.0
2016	2,162.7	1,365.9	642.3	166.9	1.2	69.0	43.6	20.5	5.3	0.0
2017	2,112.5	1,350.3	614.9	163.5	0.8	64.7	41.3	18.8	5.0	0.0
2018 **p**	2,063.5	1,323.1	600.8	155.9	0.7	61.3	39.3	17.8	4.6	0.0
2019 **p**	2,046.7	1,299.9	609.8	153.7	0.7	58.9	37.4	17.6	4.4	0.0
2020 **p**	2,314.3	1,513.2	660.6	154.2	7.4	68.7	44.9	19.6	4.6	0.2
2020 Q1 **p**	2,090.4	1,327.7	623.1	153.6	0.8	60.1	38.1	17.9	4.4	0.0
Q2 **p**	2,259.9	1,473.9	645.1	153.7	1.0	66.4	43.3	19.0	4.5	0.0
Q3 **p**	2,333.4	1,536.9	655.6	154.8	4.6	69.1	45.5	19.4	4.6	0.1
Q4 **p**	2,314.3	1,513.2	660.6	154.2	7.4	68.7	44.9	19.6	4.6	0.2
2021 Q1 **p**	2,345.1	1,538.9	665.6	154.2	16.2	69.9	45.9	19.8	4.6	0.5
Q2 **p**	2,399.0	1,589.2	669.6	155.5	21.2	69.7	46.1	19.4	4.5	0.6
Q3 **p**	2,433.2	1,617.2	674.8	155.5	24.2	69.4	46.1	19.3	4.4	0.7

Sources: Federal Statistical Office and Bundesbank calculations. **1** The deficit/surplus in accordance with ESA 2010 corresponds to the Maastricht definition. In connection with the publication of the 2021 annual figures, no revised figures were released for the first half of the year. Therefore, the 2021 half-year figures are not directly compatible with the annual figures. **2** Quarterly GDP ratios are based on the national output of the four preceding quarters.

2. General government: revenue, expenditure and deficit/surplus as shown in the national accounts*

Period	Revenue				Expenditure								
		of which:				of which:							
	Total	Taxes	Social contributions	Other	Total	Social benefits	Compensation of employees	Intermediate consumption	Gross capital formation	Interest	Other	Deficit/surplus	Memo item: Total tax burden [1]
	€ billion												
2015	1,364.9	705.1	501.2	158.6	1,335.8	721.9	233.0	153.0	64.5	42.2	121.2	+ 29.1	1,213.3
2016	1,426.7	739.2	524.3	163.3	1,390.4	754.5	240.7	162.5	68.1	37.3	127.2	+ 36.4	1,270.4
2017	1,486.9	773.3	549.5	164.2	1,443.3	784.8	250.6	169.5	71.6	33.8	132.9	+ 43.7	1,329.5
2018 **p**	1,557.3	808.2	572.6	176.5	1,492.8	805.6	260.3	176.2	78.4	31.1	141.3	+ 64.4	1,387.8
2019 **p**	1,613.8	834.4	598.2	181.2	1,562.7	846.6	272.7	184.2	83.7	27.3	148.3	+ 51.1	1,439.7
2020 **p**	1,566.9	782.1	607.9	176.9	1,712.1	905.2	284.1	209.8	90.9	21.0	201.2	– 145.2	1,397.0
2021 **pe**	1,684.8	865.2	632.6	187.0	1,838.6	938.0	293.6	234.8	90.3	21.1	260.8	– 153.9	1,505.2
	As a percentage of GDP												
2015	45.1	23.3	16.6	5.2	44.1	23.9	7.7	5.1	2.1	1.4	4.0	+ 1.0	40.1
2016	45.5	23.6	16.7	5.2	44.4	24.1	7.7	5.2	2.2	1.2	4.1	+ 1.2	40.5
2017	45.5	23.7	16.8	5.0	44.2	24.0	7.7	5.2	2.2	1.0	4.1	+ 1.3	40.7
2018 **p**	46.2	24.0	17.0	5.2	44.3	23.9	7.7	5.2	2.3	0.9	4.2	+ 1.9	41.2
2019 **p**	46.5	24.0	17.2	5.2	45.0	24.4	7.9	5.3	2.4	0.8	4.3	+ 1.5	41.5
2020 **p**	46.5	23.2	18.1	5.3	50.8	26.9	8.4	6.2	2.7	0.6	6.0	– 4.3	41.5
2021 **pe**	47.3	24.3	17.7	5.2	51.6	26.3	8.2	6.6	2.5	0.6	7.3	– 4.3	42.2
	Percentage growth rates												
2015	+ 3.9	+ 4.8	+ 3.9	+ 0.0	+ 3.0	+ 4.4	+ 2.4	+ 4.0	+ 6.6	– 10.5	– 1.8	.	+ 4.6
2016	+ 4.5	+ 4.8	+ 4.6	+ 2.9	+ 4.1	+ 4.5	+ 3.3	+ 6.2	+ 5.6	– 11.7	+ 4.9	.	+ 4.7
2017	+ 4.2	+ 4.6	+ 4.8	+ 0.5	+ 3.8	+ 4.0	+ 4.1	+ 4.3	+ 5.1	– 9.3	+ 4.5	.	+ 4.7
2018 **p**	+ 4.7	+ 4.5	+ 4.2	+ 7.5	+ 3.4	+ 2.7	+ 3.9	+ 3.9	+ 9.5	– 8.0	+ 6.3	.	+ 4.4
2019 **p**	+ 3.6	+ 3.2	+ 4.5	+ 2.7	+ 4.7	+ 5.1	+ 4.8	+ 4.5	+ 6.8	– 12.2	+ 5.0	.	+ 3.7
2020 **p**	– 2.9	– 6.3	+ 1.6	– 2.4	+ 9.6	+ 6.9	+ 4.2	+ 13.9	+ 8.7	– 23.4	+ 35.7	.	– 3.0
2021 **pe**	+ 7.5	+ 10.6	+ 4.0	+ 5.7	+ 7.4	+ 3.6	+ 3.3	+ 11.9	– 0.7	+ 0.5	+ 29.7	.	+ 7.7

Source: Federal Statistical Office. * Figures in accordance with ESA 2010. **1** Taxes and social contributions plus customs duties and bank levies to the Single Resolution Fund.

X. Public finances in Germany

3. General government: budgetary development (as per the government finance statistics)

€ billion

	Central, state and local government [1]									Social security funds [2]			General government, total		
	Revenue			Expenditure											
		of which:			of which: [3]										
Period	Total [4]	Taxes	Financial transactions [5]	Total [4]	Personnel expenditure	Current grants	Interest	Fixed asset formation	Financial transactions [5]	Deficit/ surplus	Revenue [6]	Expenditure	Deficit/ surplus	Revenue	Expenditure	Deficit/ surplus
2014 p	791.8	643.6	11.3	788.9	236.0	295.1	57.1	45.9	17.6	+ 2.9	554.5	551.1	+ 3.5	1,245.2	1,238.8	+ 6.4
2015 p	829.8	673.3	10.4	804.3	244.1	302.7	49.8	46.4	12.5	+ 25.5	575.0	573.1	+ 1.9	1,301.1	1,273.6	+ 27.4
2016 p	862.3	705.8	9.0	844.5	251.3	321.6	43.4	49.0	11.8	+ 17.8	601.8	594.8	+ 7.1	1,355.1	1,330.2	+ 24.9
2017 p	900.3	734.5	7.9	869.4	261.6	327.9	42.0	52.3	13.8	+ 30.8	631.5	622.0	+ 9.5	1,417.5	1,377.2	+ 40.3
2018 p	951.8	776.3	6.2	905.6	272.5	338.0	39.2	55.8	16.1	+ 46.2	656.2	642.5	+ 13.6	1,490.7	1,430.9	+ 59.8
2019 p	1,010.3	799.4	11.2	975.5	285.9	349.7	33.6	62.9	16.8	+ 34.8	685.0	676.7	+ 8.3	1,573.8	1,530.8	+ 43.0
2020 p	947.0	739.9	13.9	1,112.4	299.5	422.8	25.9	69.2	60.1	– 165.5	719.5	747.4	– 27.9	1,518.9	1,712.3	– 193.4
2019 Q1 p	240.9	192.7	2.5	227.7	68.3	88.5	11.5	10.2	3.3	+ 13.2	163.3	166.4	– 3.1	374.3	364.1	+ 10.2
Q2 p	256.3	201.7	2.0	236.1	70.1	87.0	12.2	13.0	2.6	+ 20.1	169.9	168.4	+ 1.5	396.1	374.5	+ 21.6
Q3 p	245.3	194.7	3.4	236.7	70.9	86.2	4.5	16.4	3.1	+ 8.6	168.8	170.3	– 1.5	384.0	376.9	+ 7.1
Q4 p	269.1	210.6	3.2	272.2	76.1	87.5	5.1	22.5	7.7	– 3.1	181.9	172.6	+ 9.3	420.7	414.5	+ 6.2
2020 Q1 p	244.8	197.4	2.5	236.4	72.9	90.5	11.9	12.0	2.6	+ 8.4	168.3	175.7	– 7.4	380.0	379.1	+ 0.9
Q2 p	211.9	158.1	2.7	271.8	72.2	119.1	8.6	15.4	3.4	– 59.8	175.9	187.0	– 11.1	354.5	425.4	– 70.9
Q3 p	227.8	181.4	4.0	282.3	72.4	102.0	1.4	18.3	34.3	– 54.5	181.1	195.0	– 13.9	370.1	438.5	– 68.4
Q4 p	259.3	201.9	4.5	315.4	81.4	109.1	5.9	22.8	19.6	– 56.1	186.0	189.5	– 3.5	408.2	467.9	– 59.6
2021 Q1 p	240.7	185.2	4.3	300.6	75.5	134.4	7.3	11.1	14.6	– 59.9	182.4	196.3	– 13.9	385.2	458.9	– 73.8
Q2 p	267.0	195.8	7.5	297.2	74.8	123.2	10.7	15.2	10.5	– 30.2	185.9	197.0	– 11.1	414.1	455.3	– 41.2

Source: Bundesbank calculations based on Federal Statistical Office data. **1** Annual figures based on the calculations of the Federal Statistical Office. Bundesbank supplementary estimations for the reporting years after 2011 that are not yet available. The quarterly figures contain numerous off-budget entities which are assigned to the general government sector as defined in the national accounts but are not yet included in the annual calculations. From 2012 also including the bad bank FMSW. **2** The annual figures do not tally with the sum of the quarterly figures, as the latter are all provisional. The quarterly figures for some insurance sectors are estimated. **3** The development of the types of expenditure recorded here is influenced in part by statistical changeovers. **4** Including discrepancies in clearing transactions between central, state and local government. **5** On the revenue side, this contains proceeds booked as disposals of equity interests and as loan repayments. On the expenditure side, this contains the acquisition of equity interests and loans granted. **6** Including central government liquidity assistance to the Federal Employment Agency.

4. Central, state and local government: budgetary development (as per the government finance statistics)

€ billion

	Central government			State government [2,3]			Local government [3]		
Period	Revenue [1]	Expenditure	Deficit/surplus	Revenue	Expenditure	Deficit/surplus	Revenue	Expenditure	Deficit/surplus
2014 p	322.9	323.3	– 0.3	338.3	336.1	+ 2.1	218.7	218.7	– 0.1
2015 p	338.3	326.5	+ 11.8	355.1	350.6	+ 4.5	232.7	229.1	+ 3.6
2016 p	344.7	338.4	+ 6.2	381.1	372.4	+ 8.8	248.9	243.1	+ 5.8
2017 p	357.8	352.8	+ 5.0	397.7	385.8	+ 11.8	260.3	249.1	+ 11.2
2018 p	374.4	363.5	+ 10.9	420.5	400.1	+ 20.4	271.8	261.5	+ 10.2
2019 p	382.5	369.2	+ 13.3	437.2	419.6	+ 17.6	284.2	278.1	+ 6.1
2020 p	341.4	472.1	– 130.7	456.4	489.4	– 33.0	297.0	294.6	+ 2.4
2019 Q1 p	84.7	86.1	– 1.4	105.7	96.7	+ 8.9	58.2	63.2	– 4.9
Q2 p	97.7	90.3	+ 7.4	106.0	100.2	+ 5.8	70.6	65.9	+ 4.7
Q3 p	93.2	91.3	+ 1.9	107.9	102.6	+ 5.2	69.1	69.2	– 0.1
Q4 p	106.9	101.5	+ 5.4	115.5	118.4	– 2.9	84.5	78.4	+ 6.0
2020 Q1 p	92.3	90.4	+ 1.9	105.6	99.7	+ 5.9	57.9	67.7	– 9.8
Q2 p	70.8	114.8	– 44.0	108.2	128.0	– 19.8	69.4	69.4	+ 0.1
Q3 p	83.7	105.4	– 21.7	112.9	113.7	– 0.8	67.5	72.6	– 5.1
Q4 p	94.5	161.5	– 67.0	127.4	146.3	– 18.9	100.3	83.5	+ 16.8
2021 Q1 p	75.0	127.5	– 52.5	113.7	120.7	– 7.1	61.1	69.7	– 8.6
Q2 p	86.4	123.5	– 37.1	122.8	122.0	+ 0.8	74.6	71.7	+ 2.9
Q3 p	93.9	128.7	– 34.7	125.9	120.2	+ 5.7	74.6	74.9	– 0.3

Source: Bundesbank calculations based on Federal Statistical Office data. **1** Any amounts of the Bundesbank's profit distribution exceeding the reference value that were used to repay parts of the debt of central government's special funds are not included here. **2** Including the local authority level of the city states Berlin, Bremen and Hamburg. **3** Quarterly data of core budgets and off-budget entities which are assigned to the general government sector.

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5. Central, state and local government: tax revenue

€ million

Period	Total	Central and state government and European Union				Local government [3]	Balance of untransferred tax shares [4]	Memo item: Amounts deducted in the Federal budget [5]
		Total	Central government [1]	State government [1]	European Union [2]			
2014	643,624	556,008	298,518	226,504	30,986	87,418	+ 198	27,772
2015	673,276	580,485	308,849	240,698	30,938	93,003	– 212	27,241
2016	705,797	606,965	316,854	260,837	29,273	98,648	+ 186	27,836
2017	734,540	629,458	336,730	271,046	21,682	105,158	– 76	27,368
2018	776,314	665,005	349,134	287,282	28,589	111,308	+ 1	26,775
2019	799,416	684,491	355,050	298,519	30,921	114,902	+ 23	25,998
2020	739,880	632,237	313,381	286,065	32,791	107,916	– 274	30,266
2019 Q1	193,054	162,696	79,669	71,578	11,450	19,816	+ 10,541	6,270
Q2	202,383	172,563	90,883	75,455	6,224	29,784	+ 37	6,179
Q3	193,918	166,676	86,117	72,677	7,882	27,569	– 327	7,402
Q4	210,062	182,556	98,381	78,809	5,365	37,733	– 10,227	6,146
2020 Q1	198,351	168,099	83,086	75,420	9,593	18,875	+ 11,377	6,855
Q2	158,161	135,185	68,653	59,557	6,974	25,107	– 2,131	6,997
Q3	182,202	156,397	78,502	72,613	5,282	25,234	+ 571	9,705
Q4	201,167	172,557	83,140	78,475	10,942	38,700	– 10,090	6,709
2021 Q1	189,223	159,178	72,814	73,137	13,227	19,882	+ 10,163	6,887
Q2	191,915	163,158	81,129	74,024	8,005	29,598	– 841	7,438
Q3	...	180,378	87,603	84,312	8,464	...	...	7,823
2020 Oct.	.	42,440	19,976	19,762	2,702	.	.	2,236
Nov.	.	44,201	18,862	20,579	4,760	.	.	2,236
2021 Oct.	.	49,736	22,502	23,413	3,821	.	.	2,328
Nov.	.	51,161	23,480	24,264	3,417	.	.	2,328

Sources: Federal Ministry of Finance, Federal Statistical Office and Bundesbank calculations. **1** Before deducting or adding supplementary central government transfers, regionalisation funds (local public transport), compensation for the transfer of motor vehicle tax to central government and consolidation assistance, which central government remits to state government. See the last column for the volume of these amounts which are deducted from tax revenue in the Federal budget. **2** Customs duties and shares in VAT and gross national income accruing to the EU from central government tax revenue. **3** Including local government taxes in the city states Berlin, Bremen and Hamburg. Including revenue from offshore wind farms. **4** Difference between local government's share in the joint taxes received by the state government cash offices in the period in question (see Table X. 6) and the amounts passed on to local government in the same period. **5** Volume of the positions mentioned under footnote 1.

6. Central and state government and European Union: tax revenue, by type

€ million

Period	Total [1]	Joint taxes									Central government taxes [9]	State government taxes [9]	EU customs duties	Memo item: Local government share in joint taxes
		Income taxes [2]					Value added taxes (VAT) [7]			Local business tax transfers [8]				
		Total	Wage tax [3]	Assessed income tax [4]	Corporation tax [5]	Investment income tax [6]	Total	Domestic VAT	Import VAT					
2014	593,039	258,875	167,983	45,613	20,044	25,236	203,110	154,228	48,883	7,142	101,804	17,556	4,552	37,031
2015	620,287	273,258	178,891	48,580	19,583	26,204	209,921	159,015	50,905	7,407	104,204	20,339	5,159	39,802
2016	648,309	291,492	184,826	53,833	27,442	25,391	217,090	165,932	51,157	7,831	104,441	22,342	5,113	41,345
2017	674,598	312,462	195,524	59,428	29,259	28,251	226,355	170,498	55,856	8,580	99,934	22,205	5,063	45,141
2018	713,576	332,141	208,231	60,415	33,425	30,069	234,800	175,437	59,363	9,078	108,586	23,913	5,057	48,571
2019	735,869	344,016	219,660	63,711	32,013	28,632	243,256	183,113	60,143	8,114	109,548	25,850	5,085	51,379
2020	682,345	320,798	209,286	58,982	24,268	28,261	219,484	168,700	50,784	3,954	105,632	27,775	4,703	50,107
2019 Q1	175,216	82,996	50,923	17,453	9,194	5,426	60,402	46,018	14,384	121	23,968	6,531	1,197	12,519
Q2	185,333	90,134	54,437	16,069	8,085	11,543	59,101	43,943	15,158	2,113	26,625	6,087	1,273	12,770
Q3	179,020	81,267	53,668	13,614	7,607	6,379	61,057	45,976	15,081	2,221	26,654	6,485	1,336	12,344
Q4	196,300	89,619	60,632	16,575	7,128	5,284	62,696	47,175	15,520	3,660	32,301	6,746	1,279	13,745
2020 Q1	181,350	88,009	53,389	18,711	8,495	7,415	60,060	46,038	14,022	244	24,517	7,406	1,114	13,251
Q2	146,360	69,928	50,760	10,633	2,348	6,187	44,262	31,625	12,638	1,170	23,525	6,326	1,149	11,175
Q3	168,308	73,766	47,470	13,492	5,411	7,392	59,819	47,933	11,886	796	25,930	6,784	1,212	11,910
Q4	186,327	89,094	57,667	16,146	8,014	7,268	55,343	43,105	12,238	1,744	31,660	7,259	1,227	13,770
2021 Q1	171,881	86,381	50,854	17,826	10,203	7,498	54,795	45,403	9,392	252	21,712	7,757	983	12,703
Q2	175,242	84,505	50,783	14,347	8,860	10,515	57,634	43,399	14,235	1,215	23,210	7,398	1,281	12,085
Q3	193,910	90,619	53,857	17,973	9,853	8,936	69,528	49,052	20,476	1,189	23,469	7,813	1,292	13,532
2020 Oct.	45,454	16,044	14,587	– 234	67	1,625	17,605	13,756	3,849	755	8,174	2,383	491	3,014
Nov.	47,545	18,208	16,425	– 128	– 130	2,040	18,511	14,343	4,168	158	8,081	2,252	335	3,344
2021 Oct.	53,425	20,523	17,149	1,308	– 161	2,227	21,421	15,389	6,032	993	7,466	2,521	501	3,689
Nov.	54,867	22,718	17,646	1,129	1,965	1,978	20,406	17,412	2,994	267	7,834	3,215	427	3,706

Source: Federal Ministry of Finance and Bundesbank calculations. **1** This total, unlike that in Table X. 5, does not include the receipts from the equalisation of burdens levies, local business tax (less local business tax transfers to central and state government), real property taxes and other local government taxes, or the balance of untransferred tax shares. **2** Respective percentage share of central, state and local government in revenue: wage tax and assessed income tax 42.5:42.5:15, corporation tax and non-assessed taxes on earnings 50:50:-, final withholding tax on interest income and capital gains, non-assessed taxes on earnings 44:44:12. **3** After deducting child benefits and subsidies for supplementary private pension plans. **4** After deducting employee refunds and research grants. **5** After deducting research grants. **6** Final withholding tax on interest income and capital gains, non-assessed taxes on earnings. **7** The allocation of revenue to central, state and local government, which is adjusted at more regular intervals, is regulated in Section 1 of the Revenue Adjustment Act. Respective percentage share of central, state and local government in revenue for 2020: 43.0:52.9:4.1. The EU share is deducted from central government's share. **8** Respective percentage share of central and state government for 2020: 39.8:60.2. **9** For the breakdown, see Table X. 7.

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7. Central, state and local government: individual taxes

€ million

Period	Central government taxes [1]								State government taxes [1]				Local government taxes		
	Energy tax	Solidarity surcharge	Tobacco tax	Insurance tax	Motor vehicle tax	Electricity tax	Alcohol tax	Other	Tax on the acquisition of land and buildings	Inheritance tax	Betting and lottery tax	Other	Total	of which: Local business tax [2]	of which: Real property taxes
2014	39,758	15,047	14,612	12,046	8,501	6,638	2,060	3,143	9,339	5,452	1,673	1,091	57,728	43,763	12,691
2015	39,594	15,930	14,921	12,419	8,805	6,593	2,070	3,872	11,249	6,290	1,712	1,088	60,396	45,752	13,215
2016	40,091	16,855	14,186	12,763	8,952	6,569	2,070	2,955	12,408	7,006	1,809	1,119	65,319	50,103	13,654
2017	41,022	17,953	14,399	13,269	8,948	6,944	2,094	– 4,695	13,139	6,114	1,837	1,115	68,522	52,899	13,966
2018	40,882	18,927	14,339	13,779	9,047	6,858	2,133	2,622	14,083	6,813	1,894	1,122	71,817	55,904	14,203
2019	40,683	19,646	14,257	14,136	9,372	6,689	2,118	2,648	15,789	6,987	1,975	1,099	71,661	55,527	14,439
2020	37,635	18,676	14,651	14,553	9,526	6,561	2,238	1,792	16,055	8,600	2,044	1,076	61,489	45,471	14,676
2019 Q1	4,848	4,679	2,495	6,542	2,594	1,646	579	586	3,976	1,705	499	351	17,959	14,139	3,350
Q2	9,937	5,257	3,588	2,543	2,491	1,659	485	665	3,667	1,660	513	247	19,163	14,869	3,881
Q3	10,519	4,624	3,667	2,770	2,251	1,639	515	668	3,923	1,824	474	264	17,118	12,659	4,019
Q4	15,379	5,086	4,507	2,281	2,035	1,745	538	730	4,223	1,798	488	237	17,422	13,861	3,190
2020 Q1	4,966	4,930	2,413	6,766	2,634	1,708	562	537	4,525	1,981	542	358	17,245	13,391	3,403
Q2	8,117	4,235	3,772	2,606	2,426	1,585	455	328	3,566	2,154	425	181	12,971	8,842	3,895
Q3	9,985	4,365	3,978	2,817	2,366	1,499	506	414	3,730	2,262	509	283	14,690	10,242	4,095
Q4	14,566	5,145	4,487	2,365	2,101	1,768	715	513	4,234	2,203	567	254	16,584	12,997	3,283
2021 Q1	4,126	3,171	2,585	6,776	2,567	1,692	395	400	4,716	2,110	578	353	17,594	13,798	3,503
Q2	8,717	2,546	4,053	2,843	2,469	1,640	528	413	4,231	2,374	538	255	17,888	13,674	4,033
Q3	9,532	2,338	3,636	2,911	2,381	1,618	514	538	4,571	2,457	516	269	...	...	...
2020 Oct.	3,283	1,044	1,439	685	755	644	167	157	1,373	737	185	89	.	.	.
Nov.	3,453	1,076	1,052	963	656	554	183	143	1,347	651	178	77	.	.	.
2021 Oct.	3,371	402	1,337	716	706	564	178	190	1,471	712	257	81	.	.	.
Nov.	3,391	511	1,185	1,002	778	565	184	218	1,665	1,266	210	74	.	.	.

Sources: Federal Ministry of Finance, Federal Statistical Office and Bundesbank calculations. **1** For the sum total, see Table X. 6. **2** Including revenue from offshore wind farms.

8. German statutory pension insurance scheme: budgetary development and assets*

€ million

Period	Revenue [1,2]			Expenditure [1,2]			Deficit/ surplus	Assets [1,4]					Memo item: Administrative assets
	Total	of which: Contributions [3]	of which: Payments from central government	Total	of which: Pension payments	of which: Pensioners' health insurance		Total	Deposits [5]	Securities	Equity interests, mortgages and other loans [6]	Real estate	
2014	269,115	189,080	78,940	265,949	226,204	15,978	+ 3,166	36,462	32,905	3,317	146	94	4,263
2015	276,129	194,486	80,464	277,717	236,634	16,705	– 1,588	35,556	32,795	2,506	167	88	4,228
2016	286,399	202,249	83,154	288,641	246,118	17,387	– 2,242	34,094	31,524	2,315	203	52	4,147
2017	299,826	211,424	87,502	299,297	255,261	18,028	+ 529	35,366	33,740	1,335	238	53	4,032
2018	312,788	221,572	90,408	308,356	263,338	18,588	+ 4,432	40,345	38,314	1,713	262	56	4,008
2019	327,298	232,014	94,467	325,436	277,282	20,960	+ 1,861	42,963	40,531	2,074	303	56	3,974
2020	335,185	235,988	98,447	339,072	289,284	21,865	– 3,887	39,880	38,196	1,286	344	55	3,901
2019 Q1	77,984	54,393	23,426	78,630	67,328	5,087	– 646	39,432	37,637	1,474	263	57	4,001
Q2	81,410	57,837	23,408	80,804	69,011	5,205	+ 605	40,232	38,639	1,272	264	57	3,996
Q3	80,305	56,637	23,481	82,716	70,633	5,330	– 2,411	38,386	36,876	1,183	271	56	3,995
Q4	86,756	63,133	23,413	82,849	70,674	5,333	+ 3,907	42,945	40,539	2,074	276	56	3,987
2020 Q1	80,578	55,999	24,436	82,622	70,829	5,346	– 2,045	40,840	38,636	1,848	300	56	3,966
Q2	82,098	57,515	24,413	82,875	70,889	5,346	– 777	39,779	37,975	1,446	304	55	3,949
Q3	82,689	58,109	24,418	86,497	74,054	5,591	– 3,808	36,898	35,197	1,333	313	55	3,925
Q4	88,978	64,375	24,412	86,605	73,879	5,576	+ 2,373	39,847	38,186	1,286	321	55	3,916
2021 Q1	83,066	57,351	25,542	86,048	73,799	5,600	– 2,982	36,888	35,326	1,166	342	54	3,887
Q2	86,386	60,666	25,545	86,486	73,905	5,679	– 100	36,941	35,554	988	345	53	3,871
Q3	85,535	59,941	25,468	87,123	74,453	5,718	– 1,588	36,041	34,670	973	345	53	3,840

Sources: Federal Ministry of Labour and Social Affairs and German pension insurance scheme. * Excluding the German pension insurance scheme for the mining, railway and maritime industries. **1** The final annual figures generally differ from the total of the reported provisional quarterly figures as the latter are not revised subsequently. **2** Including financial compensation payments. Excluding investment spending and proceeds. **3** Including contributions for recipients of government cash benefits. **4** Largely corresponds to the sustainability reserves. End of year or quarter. **5** Including cash. **6** Excluding loans to other social security funds.

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9. Federal Employment Agency: budgetary development*

€ million

Period	Revenue				Expenditure							Deficit/ surplus	Deficit-offsetting grant or loan from central government
	Total [1]	of which: Contributions	of which: Insolvency compensation levy	of which: Government funds	Total	of which: Unemployment benefit [2]	of which: Short-time working benefits [3]	of which: Job promotion [4]	of which: Re-integration payment	of which: Insolvency benefit payment	of which: Administrative expenditure [5]		
2014	33,725	28,714	1,296	–	32,147	15,368	710	6,264	.	694	5,493	+ 1,578	–
2015	35,159	29,941	1,333	–	31,439	14,846	771	6,295	.	654	5,597	+ 3,720	–
2016	36,352	31,186	1,114	–	30,889	14,435	749	7,035	.	595	5,314	+ 5,463	–
2017	37,819	32,501	882	–	31,867	14,055	769	7,043	.	687	6,444	+ 5,952	–
2018	39,335	34,172	622	–	33,107	13,757	761	6,951	.	588	8,129	+ 6,228	–
2019	35,285	29,851	638	–	33,154	15,009	772	7,302	.	842	6,252	+ 2,131	–
2020	33,678	28,236	630	–	61,013	20,617	22,719	7,384	.	1,214	6,076	– 27,335	–
2019 Q1	8,369	7,027	148	–	8,597	3,969	403	1,818	.	179	1,450	– 228	–
Q2	8,685	7,440	156	–	8,136	3,673	204	1,832	.	243	1,475	+ 549	–
Q3	8,650	7,263	162	–	7,829	3,682	68	1,711	.	190	1,510	+ 821	–
Q4	9,581	8,121	172	–	8,592	3,685	98	1,941	.	230	1,816	+ 989	–
2020 Q1	8,123	6,851	153	–	9,301	4,469	392	1,934	.	235	1,470	– 1,179	–
Q2	7,906	6,691	151	–	17,005	4,869	7,977	1,793	.	254	1,407	– 9,099	–
Q3	8,350	6,934	153	–	18,619	5,737	8,637	1,701	.	472	1,414	– 10,269	–
Q4	9,299	7,760	174	–	16,088	5,543	5,712	1,957	.	251	1,785	– 6,789	–
2021 Q1	8,228	6,747	289	–	18,260	5,956	8,006	1,935	.	184	1,391	– 10,033	–
Q2	8,830	7,301	324	–	16,720	5,029	7,495	1,912	.	108	1,452	– 7,890	–
Q3	8,791	7,290	330	–	12,042	4,447	3,631	1,744	.	91	1,452	– 3,251	–

Source: Federal Employment Agency. * Including transfers to the civil servants' pension fund. **1** Excluding central government deficit-offsetting grant or loan. **2** Unemployment benefit in case of unemployment. **3** Including seasonal short-time working benefits and restructuring short-time working benefits, restructuring measures and refunds of social contributions. **4** Vocational training, measures to encourage job take-up, rehabilitation, compensation top-up payments and promotion of business start-ups. **5** Including collection charges to other social security funds , excluding administrative expenditure within the framework of the basic allowance for job seekers.

10. Statutory health insurance scheme: budgetary development

€ million

Period	Revenue [1]			Expenditure [1]								Deficit/ surplus
	Total	of which: Contributions [2]	of which: Central government funds [3]	Total	of which: Hospital treatment	Pharmaceuticals	Medical treatment	Dental treatment [4]	Remedies and therapeutic appliances	Sickness benefits	Administrative expenditure [5]	
2014	203,143	189,089	10,500	205,589	65,711	33,093	34,202	13,028	13,083	10,619	10,063	– 2,445
2015	210,147	195,774	11,500	213,727	67,979	34,576	35,712	13,488	13,674	11,227	10,482	– 3,580
2016	223,692	206,830	14,000	222,936	70,450	35,981	37,300	13,790	14,256	11,677	11,032	+ 757
2017	233,814	216,227	14,500	230,773	72,303	37,389	38,792	14,070	14,776	12,281	10,912	+ 3,041
2018	242,360	224,912	14,500	239,706	74,506	38,327	39,968	14,490	15,965	13,090	11,564	+ 2,654
2019	251,295	233,125	14,500	252,440	77,551	40,635	41,541	15,010	17,656	14,402	11,136	– 1,145
2020	269,158	237,588	27,940	275,268	78,531	42,906	44,131	14,967	18,133	15,956	11,864	– 6,110
2019 Q1	59,809	55,622	3,625	62,485	19,586	9,947	10,386	3,738	4,106	3,649	2,707	– 2,676
Q2	62,121	57,858	3,625	62,858	19,210	10,127	10,421	3,821	4,289	3,535	2,774	– 736
Q3	62,143	57,763	3,625	62,716	19,109	10,229	10,278	3,630	4,467	3,558	2,804	– 573
Q4	67,094	61,884	3,625	64,075	19,497	10,353	10,455	3,821	4,713	3,659	2,975	+ 3,019
2020 Q1	61,949	57,419	3,625	66,438	20,049	11,086	10,806	3,804	4,470	4,061	2,816	– 4,489
Q2	68,108	58,096	9,359	69,487	17,674	10,492	10,908	3,389	3,986	4,143	2,980	– 1,378
Q3	70,130	59,403	10,151	71,063	20,913	10,567	11,642	3,774	4,852	3,829	2,970	– 934
Q4	68,645	62,672	4,805	67,987	19,887	10,729	11,019	3,891	4,725	3,920	3,039	+ 658
2021 Q1	72,970	59,338	13,303	72,660	19,631	11,175	11,564	4,069	4,564	4,287	2,967	+ 310
Q2	71,964	61,819	9,965	74,492	20,287	11,275	11,536	4,219	5,085	4,120	2,850	– 2,529
Q3	70,592	61,899	7,942	73,569	20,748	11,756	10,730	4,060	5,085	4,004	2,849	– 2,977

Source: Federal Ministry of Health. **1** The final annual figures generally differ from the total of the reported provisional quarterly figures as the latter are not revised subsequently. Excluding revenue and expenditure as part of the risk structure compensation scheme. **2** Including contributions from subsidised low-paid part-time employment. **3** Federal grant and liquidity assistance. **4** Including dentures. **5** Net, i.e. after deducting reimbursements for expenses for levying contributions incurred by other social security funds.

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11. Statutory long-term care insurance scheme: budgetary development*

€ million

Period	Revenue		Expenditure 1						Deficit/ surplus	
				of which:						
	Total	of which: Contributions 2	Total	Non-cash care benefits 3	Inpatient care total 4	Nursing benefit	Contributions to pension insurance scheme 5	Administrative expenditure		
2014	25,974	25,893	25,457	4,260	11,892	5,893	946	1,216	+	517
2015	30,825	30,751	29,101	4,626	13,003	6,410	960	1,273	+	1,723
2016	32,171	32,100	30,936	4,904	13,539	6,673	983	1,422	+	1,235
2017	36,305	36,248	38,862	6,923	16,034	10,010	1,611	1,606	–	2,557
2018	37,949	37,886	41,265	7,703	16,216	10,809	2,093	1,586	–	3,315
2019	47,228	46,508	44,008	8,257	16,717	11,689	2,392	1,781	+	3,220
2020	50,622	48,003	49,284	8,794	16,459	12,786	2,714	1,946	+	1,338
2019 Q1	11,123	10,938	10,728	2,060	4,082	2,833	547	437	+	396
Q2	11,795	11,620	10,812	2,012	4,132	2,868	588	449	+	983
Q3	11,734	11,557	11,159	2,098	4,234	2,972	598	450	+	576
Q4	12,592	12,413	11,252	2,062	4,243	3,064	626	433	+	1,339
2020 Q1	11,693	11,473	11,444	2,186	4,214	3,067	633	489	+	249
Q2	11,921	11,732	11,816	2,051	4,015	3,173	664	468	+	105
Q3	13,924	11,938	12,890	2,263	4,087	3,249	682	500	+	1,033
Q4	13,079	12,746	12,927	2,306	4,177	3,403	716	481	+	152
2021 Q1	12,093	11,831	13,344	2,355	3,971	3,387	725	512	–	1,251
Q2	12,933	12,329	13,521	2,287	4,030	3,421	745	510	–	587
Q3	12,624	12,294	13,390	2,393	4,182	3,466	783	509	–	767

Source: Federal Ministry of Health. * The final annual figures generally differ from the total of the reported provisional quarterly figures as the latter are not revised subsequently. **1** Including transfers to the long-term care provident fund. **2** Since 2005, including special contributions for childless persons (0.25% of income subject to insurance contributions). **3** Data revision in 2014. **4** From 2014, also including benefits for short-term care and daytime/night-time nursing care, inter alia. **5** For non-professional carers.

12. Central government: borrowing in the market

€ million

Period	Total new borrowing 1		of which: Change in money market loans	Change in money market deposits 3
	Gross 2	Net		
2014	+ 192,540	– 2,378	– 3,190	+ 891
2015	+ 167,655	– 16,386	– 5,884	– 1,916
2016	+ 182,486	– 11,331	– 2,332	– 16,791
2017	+ 171,906	+ 4,531	+ 11,823	+ 2,897
2018	+ 167,231	– 16,248	– 91	– 1,670
2019	+ 185,070	+ 63	– 8,044	– 914
2020	+ 456,828	+ 217,904	+ 24,181	– 3,399
2019 Q1	+ 56,654	+ 3,281	– 2,172	– 1,199
Q2	+ 48,545	+ 5,491	– 279	+ 7,227
Q3	+ 48,053	+ 4,030	+ 176	– 5,093
Q4	+ 31,817	– 12,738	– 5,768	– 1,849
2020 Q1	+ 65,656	+ 31,296	+ 9,236	+ 1,698
Q2	+ 185,560	+ 126,585	+ 31,212	– 7,314
Q3	+ 159,067	+ 80,783	– 6,080	+ 588
Q4	+ 46,545	– 20,760	– 10,187	+ 1,629
2021 Q1	+ 109,953	+ 42,045	– 11,737	– 4,708
Q2	+ 146,852	+ 57,601	+ 3,463	+ 1,576

Source: Federal Republic of Germany – Finance Agency. **1** Including the Financial Market Stabilisation Fund, the Investment and Repayment Fund and the Restructuring Fund for Credit Institutions. **2** After deducting repurchases. **3** Excluding the central account balance with the Deutsche Bundesbank.

13. General government: debt by creditor*

€ million

Period (end of year or quarter)	Total	Banking system		Domestic non-banks		Foreign creditors pe
		Bundesbank	Domestic MFIs pe	Other domestic financial corporations pe	Other domestic creditors 1	
2014	2,203,723	12,774	621,350	190,130	44,748	1,334,720
2015	2,178,094	85,952	608,042	186,661	49,906	1,247,533
2016	2,162,650	205,391	586,202	179,755	46,342	1,144,959
2017	2,112,469	319,159	539,558	175,617	43,442	1,034,694
2018	2,063,538	364,731	496,130	181,077	43,453	978,147
2019	2,046,671	366,562	466,694	177,601	48,340	987,476
2020 p	2,314,330	522,392	496,606	184,701	53,450	1,057,180
2019 Q1	2,073,704	359,884	485,579	179,512	43,594	1,005,136
Q2	2,064,129	361,032	478,965	179,168	42,838	1,002,126
Q3	2,081,124	358,813	476,798	179,228	49,221	1,017,065
Q4	2,046,671	366,562	466,694	177,601	48,340	987,476
2020 Q1 p	2,090,390	371,076	483,783	180,477	49,428	1,005,626
Q2 p	2,259,854	424,141	548,754	181,288	49,629	1,056,041
Q3 p	2,333,413	468,723	520,248	184,051	51,683	1,108,708
Q4 p	2,314,330	522,392	496,606	184,701	53,450	1,057,180
2021 Q1 p	2,345,138	561,443	478,289	182,756	52,095	1,070,554
Q2 p	2,399,045	620,472	477,703	182,868	43,990	1,074,011
Q3 p	2,433,247	669,659	486,439	183,485	41,335	1,052,328

Source: Bundesbank calculations based on data from the Federal Statistical Office. * As defined in the Maastricht Treaty. **1** Calculated as a residual.

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14. Maastricht debt by instrument

€ million

Period (end of year or quarter)	Total	Currency and deposits [1]	Debt securities by original maturity: Short-term debt securities (up to one year)	Debt securities by original maturity: Long-term debt securities (more than one year)	Loans by original maturity: Short-term loans (up to one year)	Loans by original maturity: Long-term loans (more than one year)	Memo item: [2] Debt vis-à-vis other government subsectors	Memo item: [2] Claims vis-à-vis other government subsectors
General government								
2014	2,203,723	12,150	72,618	1,501,494	95,952	521,508	.	.
2015	2,178,094	14,303	65,676	1,498,922	90,350	508,842	.	.
2016	2,162,650	15,845	69,715	1,483,871	96,254	496,965	.	.
2017	2,112,469	14,651	48,789	1,484,462	87,799	476,769	.	.
2018	2,063,538	14,833	52,572	1,456,160	77,296	462,676	.	.
2019 Q1	2,073,704	15,663	64,218	1,460,634	72,005	461,184	.	.
Q2	2,064,129	12,868	56,256	1,463,027	75,284	456,693	.	.
Q3	2,081,124	17,586	62,602	1,465,529	79,918	455,491	.	.
Q4	2,046,671	14,595	49,180	1,458,540	69,289	455,068	.	.
2020 Q1 **p**	2,090,390	11,590	70,912	1,472,174	85,137	450,577	.	.
Q2 **p**	2,259,854	13,333	122,225	1,533,762	142,708	447,826	.	.
Q3 **p**	2,333,413	12,134	180,445	1,582,430	111,480	446,923	.	.
Q4 **p**	2,314,330	14,768	163,401	1,593,394	94,288	448,479	.	.
2021 Q1 **p**	2,345,138	12,482	180,788	1,637,711	69,668	444,488	.	.
Q2 **p**	2,399,045	13,183	175,436	1,690,315	76,371	443,740	.	.
Q3 **p**	2,433,247	13,601	183,243	1,712,408	79,898	444,096	.	.
Central government								
2014	1,398,475	12,150	64,230	1,141,973	54,388	125,735	1,202	12,926
2015	1,372,199	14,303	49,512	1,138,862	45,256	124,265	1,062	13,667
2016	1,365,933	15,845	55,208	1,123,853	50,004	121,022	556	8,567
2017	1,350,298	14,651	36,297	1,131,896	47,761	119,693	1,131	10,618
2018	1,323,058	14,833	42,246	1,107,140	42,057	116,782	933	9,975
2019 Q1	1,324,528	15,663	50,032	1,102,604	39,185	117,044	809	11,583
Q2	1,320,388	12,868	42,752	1,109,057	38,950	116,761	835	13,862
Q3	1,328,106	17,586	48,934	1,105,439	39,067	117,080	704	13,849
Q4	1,299,872	14,595	38,480	1,101,866	28,617	116,314	605	10,301
2020 Q1 **p**	1,327,729	11,590	56,680	1,103,935	38,714	116,809	605	8,174
Q2 **p**	1,473,936	13,333	109,221	1,139,513	95,489	116,381	585	7,136
Q3 **p**	1,536,918	12,134	166,564	1,178,691	62,933	116,596	605	11,878
Q4 **p**	1,513,204	14,768	154,498	1,180,688	46,811	116,439	609	14,741
2021 Q1 **p**	1,538,857	12,482	167,484	1,212,500	29,837	116,553	632	23,153
Q2 **p**	1,589,176	13,183	165,373	1,259,211	35,006	116,404	631	29,675
Q3 **p**	1,617,179	13,601	170,961	1,280,591	35,981	116,045	677	31,613
State government								
2014	658,164	–	8,391	361,916	19,245	268,612	14,825	2,297
2015	659,521	–	16,169	362,376	23,349	257,627	15,867	2,348
2016	642,291	–	14,515	361,996	20,482	245,298	11,273	1,694
2017	614,926	–	12,543	354,688	19,628	228,067	14,038	2,046
2018	600,776	–	10,332	351,994	18,864	219,587	14,035	1,891
2019 Q1	612,478	–	14,190	361,293	19,374	217,621	15,229	2,004
Q2	610,700	–	13,508	357,571	24,784	214,838	17,631	1,887
Q3	620,694	–	13,671	363,723	29,765	213,535	17,755	1,957
Q4	609,828	–	10,703	360,495	25,768	212,862	14,934	1,826
2020 Q1 **p**	623,096	–	14,234	372,021	28,582	208,260	12,346	1,783
Q2 **p**	645,075	–	13,006	398,404	28,298	205,368	11,168	2,085
Q3 **p**	655,581	–	13,882	408,310	29,662	203,728	11,864	2,090
Q4 **p**	660,572	–	8,904	417,307	30,371	203,990	12,143	1,411
2021 Q1 **p**	665,624	–	13,305	430,103	23,404	198,812	11,219	2,018
Q2 **p**	669,605	–	10,064	436,434	25,197	197,910	12,834	2,073
Q3 **p**	674,763	–	12,284	437,437	26,603	198,439	11,752	2,146
Local government								
2014	163,639	–	–	1,297	26,065	136,276	1,959	734
2015	164,036	–	–	2,047	27,474	134,515	2,143	463
2016	166,931	–	–	2,404	27,002	137,524	1,819	431
2017	163,501	–	–	3,082	24,572	135,848	1,881	466
2018	155,884	–	1	3,046	20,425	132,412	1,884	497
2019 Q1	154,169	–	1	2,960	18,857	132,351	2,139	498
Q2	152,796	–	–	2,961	18,814	131,021	2,016	525
Q3	152,271	–	–	3,016	18,574	130,681	2,065	555
Q4	153,673	–	–	2,996	19,079	131,598	1,856	532
2020 Q1 **p**	153,582	–	–	3,128	19,734	130,720	1,825	508
Q2 **p**	153,716	–	–	3,094	19,718	130,903	2,085	350
Q3 **p**	154,845	–	–	2,961	20,596	131,288	2,107	339
Q4 **p**	154,203	–	–	3,366	18,137	132,700	1,406	330
2021 Q1 **p**	154,202	–	–	3,121	17,357	133,723	2,020	345
Q2 **p**	155,485	–	–	3,121	18,400	133,964	2,090	348
Q3 **p**	155,508	–	–	3,000	18,362	134,146	2,151	344

For footnotes see end of table.

X. Public finances in Germany

14. Maastricht debt by instrument (cont'd)

€ million

Period (end of year or quarter)	Total	Currency and deposits [1]	Debt securities by original maturity: Short-term debt securities (up to one year)	Debt securities by original maturity: Long-term debt securities (more than one year)	Loans by original maturity: Short-term loans (up to one year)	Loans by original maturity: Long-term loans (more than one year)	Memo item: [2] Debt vis-à-vis other government subsectors	Memo item: [2] Claims vis-à-vis other government subsectors
Social security funds								
2014	1,524	–	–	–	481	1,043	94	2,122
2015	1,502	–	–	–	537	965	91	2,685
2016	1,232	–	–	–	562	670	89	3,044
2017	807	–	–	–	262	545	15	3,934
2018	690	–	–	–	388	302	16	4,506
2019 Q1	723	–	–	–	453	270	16	4,110
Q2	742	–	–	–	557	185	16	4,224
Q3	594	–	–	–	391	203	16	4,179
Q4	711	–	–	–	375	336	16	4,753
2020 Q1 **p**	775	–	–	–	287	488	16	4,328
Q2 **p**	980	–	–	–	581	399	16	4,284
Q3 **p**	4,602	–	–	–	4,210	392	3,956	4,226
Q4 **p**	7,439	–	–	–	7,128	311	6,931	4,606
2021 Q1 **p**	16,179	–	–	–	15,985	194	15,853	4,209
Q2 **p**	21,194	–	–	–	20,995	199	20,860	4,318
Q3 **p**	24,248	–	–	–	24,053	195	23,872	4,348

Source: Bundesbank calculations based on data from the Federal Statistical Office and the Federal Republic of Germany – Finance Agency. **1** Particularly liabilities resulting from coins in circulation. **2** Besides direct loan relationships, claims and debt vis-à-vis other government subsectors also comprise securities holdings purchased on the market. No entry for general government as debt and claims are consolidated between different government subsectors.

15. Maastricht debt of central government by instrument and category

€ million

Period (end of year or quarter)	Total [1]	Currency and deposits [2]: Total [1]	Currency and deposits [2]: of which: [3] Federal day bond	Debt securities: Total [1]	Debt securities: of which: [3] Federal bonds (Bunds)	Federal notes (Bobls)	Inflation-linked Federal bonds (Bunds) [4]	Inflation-linked Federal notes (Bobls) [4]	Capital indexation of inflation-linked securities	Federal Treasury notes (Schätze) [5]	Treasury discount paper (Bubills) [6]	Federal savings notes	Loans [1]
2007	987,909	6,675	.	917,584	564,137	173,949	10,019	3,444	506	102,083	37,385	10,287	63,650
2008	1,019,905	12,466	3,174	928,754	571,913	164,514	12,017	7,522	1,336	105,684	40,795	9,649	78,685
2009	1,086,173	9,981	2,495	1,013,072	577,798	166,471	16,982	7,748	1,369	113,637	104,409	9,471	63,121
2010	1,337,160	10,890	1,975	1,084,019	602,624	185,586	25,958	9,948	2,396	126,220	85,867	8,704	242,251
2011	1,346,869	10,429	2,154	1,121,331	615,200	199,284	29,313	14,927	3,961	130,648	58,297	8,208	215,109
2012	1,390,377	9,742	1,725	1,177,168	631,425	217,586	35,350	16,769	5,374	117,719	56,222	6,818	203,467
2013	1,392,745	10,592	1,397	1,192,025	643,200	234,759	41,105	10,613	4,730	110,029	50,004	4,488	190,127
2014	1,398,475	12,150	1,187	1,206,203	653,823	244,633	48,692	14,553	5,368	103,445	27,951	2,375	180,123
2015	1,372,199	14,303	1,070	1,188,375	663,296	232,387	59,942	14,553	5,607	96,389	18,536	1,305	169,521
2016	1,365,933	15,845	1,010	1,179,062	670,245	221,551	51,879	14,585	3,602	95,727	23,609	737	171,026
2017	1,350,298	14,651	966	1,168,193	693,687	203,899	58,365	14,490	4,720	91,013	10,037	289	167,455
2018	1,323,058	14,833	921	1,149,386	710,513	182,847	64,647	–	5,139	86,009	12,949	48	158,839
2019	1,299,872	14,595	–	1,140,346	719,747	174,719	69,805	–	6,021	89,230	13,487	.	144,931
2020 **p**	1,513,204	14,768	.	1,335,186	808,300	183,046	58,279	–	3,692	98,543	113,141	.	163,250
2019 Q1	1,324,528	15,663	902	1,152,636	709,008	178,900	66,531	–	4,191	89,782	18,288	31	156,229
Q2	1,320,388	12,868	852	1,151,809	720,904	173,313	68,110	–	5,691	91,024	15,042	19	155,711
Q3	1,328,106	17,586	822	1,154,373	711,482	183,268	69,088	–	5,639	90,416	18,100	–	156,147
Q4	1,299,872	14,595	–	1,140,346	719,747	174,719	69,805	–	6,021	89,230	13,487	.	144,931
2020 Q1 **p**	1,327,729	11,590	.	1,160,616	721,343	182,095	71,028	–	5,310	91,084	23,572	.	155,524
Q2 **p**	1,473,936	13,333	.	1,248,734	774,587	178,329	56,061	–	3,752	95,622	79,987	.	211,869
Q3 **p**	1,536,918	12,134	.	1,345,255	796,338	191,388	57,144	–	3,737	99,276	127,478	.	179,529
Q4 **p**	1,513,204	14,768	.	1,335,186	808,300	183,046	58,279	–	3,692	98,543	113,141	.	163,250
2021 Q1 **p**	1,538,857	12,482	.	1,379,984	821,254	194,571	60,687	–	3,857	103,910	134,800	.	146,390
Q2 **p**	1,589,176	13,183	.	1,424,584	873,345	189,048	62,569	–	5,056	104,997	139,451	.	151,410
Q3 **p**	1,617,179	13,601	.	1,451,552	884,358	203,353	63,851	–	5,456	105,398	146,533	.	152,026

Sources: Federal Republic of Germany – Finance Agency, Federal Statistical Office, and Bundesbank calculations. **1** Comprises all of central government, i.e. all off-budget entities in addition to the core budget, including the government-owned bad bank FMS Wertmanagement and liabilities attributed to central government from an economic perspective under the European System of Accounts (ESA) 2010. **2** Particularly liabilities resulting from coins in circulation. **3** Issuances by the Federal Republic of Germany. Excluding issuers' holdings of own securities but including those held by other government entities. **4** Excluding inflation-induced indexation of capital. **5** Including medium-term notes issued by the Treuhand agency (expired in 2011). **6** Including Federal Treasury financing papers (expired in 2014).

XI. Economic conditions in Germany

1. Origin and use of domestic product, distribution of national income

Item	2019	2020	2021	2019	2020	2021	2020 Q1	2020 Q2	2020 Q3	2020 Q4	2021 Q1	2021 Q2	2021 Q3
	Index 2015=100			Annual percentage change									
At constant prices, chained													
I. Origin of domestic product													
Production sector (excluding construction)	108.0	98.0	101.7	− 1.6	− 9.3	3.8	− 5.1	−21.3	− 9.5	− 1.4	− 2.1	19.9	1.9
Construction	104.2	108.2	107.7	0.4	3.8	− 0.4	6.0	1.9	− 1.8	9.0	− 4.5	3.1	3.5
Wholesale/retail trade, transport and storage, hotel and restaurant services	109.1	103.5	106.6	3.3	− 5.2	3.0	0.3	−14.9	− 2.7	− 2.9	− 7.7	12.4	2.8
Information and communication	120.7	119.5	123.5	3.8	− 1.0	3.3	0.6	− 4.4	− 1.1	0.5	0.4	6.6	2.6
Financial and insurance activities	95.3	95.8	95.4	1.3	0.5	− 0.4	0.4	0.8	1.3	− 0.4	− 0.8	− 0.5	0.9
Real estate activities	102.7	102.3	103.3	0.9	− 0.4	1.0	0.0	− 1.6	0.2	− 0.4	− 0.0	1.8	0.3
Business services [1]	110.7	102.5	108.1	0.1	− 7.4	5.4	− 1.4	−13.4	− 8.2	− 6.9	− 6.7	9.8	6.1
Public services, education and health	107.0	103.5	106.9	1.8	− 3.2	3.2	− 0.5	− 8.9	0.0	− 3.8	− 3.2	10.3	2.9
Other services	103.3	92.5	93.1	1.9	−10.5	0.6	− 2.7	−19.7	− 3.9	−16.0	−10.5	8.1	1.8
Gross value added	107.3	102.1	105.0	1.0	− 4.9	2.9	− 1.3	−11.9	− 3.9	− 2.4	− 3.8	10.5	2.6
Gross domestic product [2]	107.2	102.3	105.1	1.1	− 4.6	2.7	− 1.5	−11.3	− 3.6	− 1.9	− 3.2	10.4	2.5
II. Use of domestic product													
Private consumption [3]	107.0	100.8	100.8	1.6	− 5.9	0.0	− 1.1	−13.2	− 3.4	− 5.7	− 9.2	6.5	1.6
Government consumption	110.0	113.9	117.7	3.0	3.5	3.4	2.5	3.5	4.0	4.2	2.4	6.0	2.2
Machinery and equipment	113.1	100.5	103.7	1.0	−11.2	3.2	− 9.4	−23.6	− 9.5	− 2.9	0.6	20.7	− 1.9
Premises	108.7	111.4	112.0	1.1	2.5	0.5	5.4	0.7	− 0.6	5.1	− 1.8	4.7	2.0
Other investment [4]	119.9	121.1	121.9	5.5	1.0	0.7	3.8	− 1.3	0.3	1.3	− 2.1	2.6	0.8
Changes in inventories [5,6]	.	.	.	− 0.1	− 0.9	0.7	− 0.3	− 0.2	− 1.9	− 1.3	0.3	0.4	2.0
Domestic demand	109.5	105.2	107.2	1.8	− 4.0	1.9	− 0.3	− 8.5	− 3.7	− 3.3	− 4.4	7.4	3.7
Net exports [6]	.	.	.	− 0.7	− 0.8	0.9	− 1.2	− 3.3	− 0.1	1.2	0.9	3.3	− 0.9
Exports	111.2	100.8	110.3	1.1	− 9.3	9.4	− 3.1	−22.1	− 9.1	− 3.1	− 0.5	26.4	5.5
Imports	117.5	107.4	116.6	2.9	− 8.6	8.6	− 0.6	−17.3	−10.1	− 6.4	− 2.9	20.1	8.9
Gross domestic product [2]	107.2	102.3	105.1	1.1	− 4.6	2.7	− 1.5	−11.3	− 3.6	− 1.9	− 3.2	10.4	2.5
At current prices (€ billion)													
III. Use of domestic product													
Private consumption [3]	1,802.9	1,708.0	1,760.6	2.9	− 5.3	3.1	0.5	−12.1	− 3.7	− 5.6	− 7.5	8.3	5.5
Government consumption	705.2	754.6	804.3	5.2	7.0	6.6	5.4	7.6	7.3	7.7	6.6	7.1	7.1
Machinery and equipment	241.1	216.9	227.7	2.4	−10.0	5.0	− 8.0	−22.5	− 8.3	− 1.9	2.0	22.5	− 0.1
Premises	364.1	380.1	413.8	5.4	4.4	8.9	9.0	3.7	0.0	5.7	0.0	9.8	14.3
Other investment [4]	137.0	138.9	141.5	6.9	1.4	1.8	4.3	− 1.0	0.6	1.7	− 1.0	3.8	2.0
Changes in inventories [5]	26.8	−23.7	11.8	.	.	.	.	.	.	.	.	.	.
Domestic use	3,277.1	3,174.8	3,359.6	3.7	− 3.1	5.8	1.6	− 7.7	− 3.4	− 3.0	− 2.8	9.8	9.2
Net exports	196.2	192.8	204.3	.	.	.	.	.	.	.	.	.	.
Exports	1,619.4	1,462.1	1,685.4	1.7	− 9.7	15.3	− 2.8	−22.5	− 9.9	− 3.8	0.5	31.6	13.1
Imports	1,423.2	1,269.3	1,481.2	2.7	−10.8	16.7	− 1.6	−21.0	−12.5	− 8.1	− 2.3	29.4	19.5
Gross domestic product [2]	3,473.4	3,367.6	3,563.9	3.1	− 3.0	5.8	0.8	− 9.2	− 2.7	− 1.3	− 1.5	11.5	7.1
IV. Prices (2015=100)													
Private consumption	105.1	105.8	109.0	1.3	0.6	3.0	1.6	1.3	− 0.3	0.1	1.9	1.7	3.8
Gross domestic product	107.0	108.8	112.1	2.1	1.6	3.1	2.4	2.4	1.0	0.6	1.8	1.0	4.5
Terms of trade	100.8	102.9	100.8	0.7	2.0	− 2.0	1.3	4.2	1.8	1.2	0.5	− 3.4	− 2.3
V. Distribution of national income													
Compensation of employees	1,855.5	1,852.1	1,915.2	4.6	− 0.2	3.4	2.9	− 3.2	− 0.7	0.4	− 0.4	5.4	4.4
Entrepreneurial and property income	752.7	676.1	780.2	− 1.5	−10.2	15.4	− 5.6	−27.2	− 7.4	− 2.2	1.9	41.5	12.8
National income	2,608.2	2,528.2	2,695.4	2.8	− 3.1	6.6	0.1	− 9.8	− 2.8	− 0.3	0.3	13.3	6.8
Memo item: Gross national income	3,586.0	3,461.3	3,669.8	3.2	− 3.5	6.0	0.3	− 9.2	− 3.4	− 1.7	− 1.3	11.5	7.6

Source: Federal Statistical Office; figures computed in November 2021. Initial annual results for 2021: figures computed in January 2022. **1** Professional, scientific, technical, administration and support service activities. **2** Gross value added plus taxes on products (netted with subsidies on products). **3** Including non-profit institutions serving households. **4** Intellectual property rights (inter alia, computer soft ware and entertainment, literary or artistic originals) and cultivated assets. **5** Including net increase in valuables. **6** Contribution of growth to GDP.

XI. Economic conditions in Germany

2. Output in the production sector *

Adjusted for working-day variations **o**

	Production sector, total	of which: Construction	of which: Energy	Industry: Total	of which: by main industrial grouping: Intermediate goods	Capital goods	Durable goods	Non-durable goods	of which: by economic sector: Manufacture of basic metals and fabricated metal products	Manufacture of computers, electronic and optical products and electrical equipment	Macinery and equipment	Motor vehicels, trailers and semi-trailers
2015 = 100												
% of total **1**	100	14,04	6,37	79,59	29,45	36,98	2.27	10,89	10,31	9,95	12,73	14,16
Period												
2017	104.9	108.7	98.9	104.7	104.9	105.0	106.9	103.0	106.2	107.0	104.1	105.3
2018 **2**	105.9	109.1	97.4	106.0	105.5	106.0	106.2	106.9	107.3	108.9	106.5	103.5
2019	102.5	112.8	90.4	101.6	101.8	101.4	106.2	101.0	102.8	106.5	103.4	92.0
2020	94.1	116.1	84.4	91.0	94.9	85.7	97.6	97.2	90.5	98.5	89.5	69.3
2020 Q3	93.7	118.5	78.8	90.5	94.4	84.8	97.9	98.0	89.7	97.1	86.6	71.7
Q4	101.8	130.7	91.8	97.5	98.3	95.9	106.5	99.0	95.4	105.3	98.5	81.4
2021 Q1	95.0	94.7	92.0	95.2	103.6	88.1	100.7	96.1	99.4	107.0	91.3	75.4
Q2	97.7	118.2	81.5	95.3	104.8	87.1	103.0	96.4	101.1	108.2	95.3	66.7
Q3 **x**	96.1	120.2	80.2	93.1	101.8	82.5	102.4	103.3	96.9	109.2	94.5	55.2
2020 Nov.	106.0	130.4	91.8	102.8	104.2	101.4	114.4	101.6	103.1	111.1	98.8	92.5
Dec.	97.6	137.0	92.2	91.1	87.9	92.9	96.5	92.5	84.2	100.3	106.5	66.2
2021 Jan.	88.6	76.3	97.5	90.0	100.2	80.9	95.6	92.4	94.1	100.4	82.1	71.0
Feb.	90.9	88.9	86.5	91.6	99.3	85.6	99.2	89.8	96.6	104.2	88.2	74.1
Mar.	105.4	119.0	92.1	104.1	111.2	97.7	107.3	106.2	107.6	116.5	103.6	81.0
Apr.	97.4	116.1	86.5	95.0	104.2	88.1	101.9	92.0	100.9	106.9	94.5	71.2
May	96.5	117.6	81.2	94.0	104.7	84.6	100.4	95.8	99.7	106.4	93.0	64.1
June	99.1	120.8	76.9	97.0	105.4	88.5	106.7	101.4	102.7	111.2	98.4	64.7
July **3,x**	99.3	123.8	77.5	96.7	105.2	87.6	102.9	103.4	100.4	110.4	98.1	64.7
Aug. **3,x**	89.9	113.5	79.9	86.6	97.8	73.2	92.9	100.1	90.4	105.8	86.3	42.8
Sep. **x**	99.0	123.2	83.2	95.9	102.5	86.6	111.4	106.3	99.9	111.5	99.2	58.2
Oct. **x**	100.8	125.9	92.3	97.1	103.8	87.7	113.1	107.3	100.6	109.9	96.3	63.7
Nov. **x,p**	103.5	128.7	89.7	100.2	103.7	94.2	113.9	108.3	102.4	111.9	100.0	71.4
Annual percentage change												
2017	+ 3.3	+ 3.3	+ 0.4	+ 3.6	+ 4.1	+ 3.7	+ 4.2	+ 2.1	+ 4.5	+ 5.9	+ 4.5	+ 3.1
2018 **2**	+ 1.0	+ 0.4	− 1.5	+ 1.2	+ 0.6	+ 1.0	− 0.7	+ 3.8	+ 1.0	+ 1.8	+ 2.3	− 1.7
2019	− 3.2	+ 3.4	− 7.2	− 4.2	− 3.5	− 4.3	± 0.0	− 5.5	− 4.2	− 2.2	− 2.9	− 11.1
2020	− 8.2	+ 2.9	− 6.6	− 10.4	− 6.8	− 15.5	− 8.1	− 3.8	− 12.0	− 7.5	− 13.4	− 24.7
2020 Q3	− 8.4	− 0.5	− 2.9	− 10.4	− 7.5	− 15.3	− 6.1	− 3.1	− 12.7	− 9.7	− 15.1	− 19.5
Q4	− 1.6	+ 5.0	− 2.7	− 3.0	+ 1.1	− 6.0	− 2.5	− 3.7	− 1.9	− 0.6	− 9.2	− 4.2
2021 Q1	− 1.7	− 4.7	− 2.3	− 1.1	+ 2.3	− 3.3	− 0.9	− 3.8	+ 1.3	+ 3.5	− 0.1	− 5.9
Q2	+ 15.9	+ 2.0	+ 11.9	+ 19.7	+ 22.4	+ 22.8	+ 22.1	+ 4.8	+ 28.2	+ 22.5	+ 17.2	+ 51.1
Q3 **x**	+ 2.5	+ 1.4	+ 1.8	+ 2.8	+ 7.9	− 2.7	+ 4.6	+ 5.4	+ 8.0	+ 12.5	+ 9.2	− 23.0
2020 Nov.	− 2.5	+ 3.1	− 3.6	− 3.6	+ 0.9	− 6.5	− 1.6	− 5.4	− 1.9	+ 0.1	− 9.0	− 5.5
Dec.	+ 0.8	+ 9.3	− 3.8	− 0.8	+ 5.5	− 4.9	− 0.9	− 1.3	+ 2.3	+ 2.1	− 8.5	− 1.2
2021 Jan.	− 3.7	− 9.9	− 2.6	− 2.9	+ 1.6	− 6.0	− 3.4	− 5.7	− 1.1	+ 0.8	− 0.6	− 12.2
Feb.	− 6.6	− 7.6	− 5.7	− 6.5	− 1.7	− 10.2	− 4.3	− 8.1	− 2.1	+ 1.5	− 3.3	− 19.6
Mar.	+ 4.9	+ 1.5	+ 1.3	+ 5.9	+ 6.9	+ 6.3	+ 5.1	+ 2.1	+ 6.7	+ 8.1	+ 3.2	+ 20.5
Apr.	+ 27.5	+ 3.2	+ 18.8	+ 35.1	+ 25.7	+ 61.7	+ 44.5	+ 2.7	+ 37.8	+ 27.6	+ 35.0	+ 384.4
May	+ 16.8	+ 3.8	+ 13.2	+ 20.4	+ 24.6	+ 21.6	+ 17.7	+ 7.0	+ 29.0	+ 22.9	+ 20.0	+ 40.6
June	+ 5.7	− 0.7	+ 3.9	+ 7.2	+ 17.2	− 0.1	+ 9.8	+ 4.8	+ 19.4	+ 17.7	+ 2.0	− 10.3
July **3,x**	+ 6.0	+ 3.3	+ 2.4	+ 6.9	+ 12.8	+ 1.9	+ 11.0	+ 6.1	+ 16.1	+ 16.9	+ 13.5	− 14.9
Aug. **3,x**	+ 2.2	− 0.3	− 1.0	+ 3.0	+ 7.4	− 2.8	+ 1.4	+ 6.9	+ 5.5	+ 12.9	+ 9.5	− 25.3
Sep. **x**	− 0.4	+ 1.1	+ 4.1	− 1.1	+ 3.7	− 6.9	+ 1.7	+ 3.4	+ 3.1	+ 8.1	+ 4.9	− 28.9
Oct. **x**	− 0.9	+ 1.0	+ 1.1	− 1.4	+ 1.1	− 6.0	+ 4.0	+ 4.4	+ 1.6	+ 5.2	+ 6.6	− 25.5
Nov. **x,p**	− 2.4	− 1.3	− 2.3	− 2.5	− 0.5	− 7.1	− 0.4	+ 6.6	− 0.7	+ 0.7	+ 1.2	− 22.8

Source of the unadjusted figures: Federal Statistical Office. ***** For explanatory notes, see Statistical Series - Seasonally adjusted business statistics, Tabels III.1.a to III.1.c **o** Using JDemetra+ 2.2.2 (X13). **1** Share of gross value added at factor cost of the production sector in the base year 2015. **2** As of January 2018 weights in structural and civil engineering work corrected by the Federal Statistical Office. **3** Influenced by a change in holiday dates. **x** Provisional; estimated and adjusted in advance by the Federal Statistical Office to the results of the Quarterly Production Survey and the Quarterly Survey in the specialised construction industry, respectively.

XI. Economic conditions in Germany

3. Orders received by industry *

Adjusted for working-day variations **o**

Period	Industry		of which: Intermediate goods		Capital goods		Consumer goods		of which: Durable goods		Non-durable goods	
	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change
Total												
2017	108.6	+ 7.8	109.4	+ 10.6	108.5	+ 6.5	105.7	+ 5.1	116.5	+ 10.6	102.2	+ 3.2
2018	110.5	+ 1.7	111.5	+ 1.9	109.9	+ 1.3	110.0	+ 4.1	118.9	+ 2.1	107.1	+ 4.8
2019	104.9	− 5.1	103.5	− 7.2	105.4	− 4.1	107.0	− 2.7	123.3	+ 3.7	101.6	− 5.1
2020	97.2	− 7.3	97.9	− 5.4	95.6	− 9.3	105.8	− 1.1	124.4	+ 0.9	99.6	− 2.0
2020 Nov.	113.7	+ 7.1	114.0	+ 10.5	113.9	+ 6.2	110.2	− 1.3	138.2	+ 0.1	101.0	− 1.8
Dec.	108.6	+ 6.3	101.7	+ 9.8	113.7	+ 4.2	102.7	+ 9.6	131.3	+ 9.0	93.2	+ 9.9
2021 Jan.	110.2	+ 1.7	119.6	+ 7.7	104.2	− 2.2	111.1	+ 1.0	140.1	+ 8.4	101.5	− 2.0
Feb.	111.4	+ 6.6	116.8	+ 10.4	108.0	+ 5.6	111.2	− 2.8	128.5	+ 6.1	105.4	− 6.1
Mar.	129.0	+ 30.8	133.4	+ 23.2	127.0	+ 40.2	123.9	+ 8.9	146.8	+ 19.4	116.3	+ 5.1
Apr.	118.2	+ 84.4	126.2	+ 64.3	114.1	+ 116.5	111.4	+ 21.9	161.7	+ 84.4	94.8	+ 2.5
May	114.3	+ 60.3	123.0	+ 60.4	109.0	+ 68.0	113.5	+ 19.3	157.0	+ 41.4	99.1	+ 10.2
June	125.7	+ 30.8	127.7	+ 48.5	126.0	+ 23.5	114.1	+ 15.4	151.2	+ 31.5	101.8	+ 8.8
July	127.6	+ 32.4	128.1	+ 35.6	127.4	+ 32.2	127.8	+ 21.1	150.1	+ 24.8	120.4	+ 19.7
Aug.	106.5	+ 16.8	115.8	+ 29.0	100.1	+ 10.7	111.2	+ 6.6	132.0	+ 6.3	104.3	+ 6.6
Sep.	122.1	+ 17.2	123.2	+ 21.1	122.6	+ 17.0	113.6	+ 1.8	138.8	− 5.2	105.2	+ 5.1
Oct.	117.2	+ 7.3	126.7	+ 17.0	110.8	+ 1.3	120.3	+ 8.0	143.3	− 1.2	112.8	+ 12.5
Nov. p	124.3	+ 9.3	132.1	+ 15.9	119.6	+ 5.0	124.4	+ 12.9	153.7	+ 11.2	114.7	+ 13.6
From the domestic market												
2017	107.0	+ 7.3	107.1	+ 9.7	107.8	+ 5.9	101.6	+ 3.7	108.7	+ 5.4	99.3	+ 3.1
2018	107.2	+ 0.2	108.6	+ 1.4	106.6	− 1.1	102.9	+ 1.3	114.7	+ 5.5	98.9	− 0.4
2019	101.2	− 5.6	99.1	− 8.7	102.9	− 3.5	101.2	− 1.7	116.2	+ 1.3	96.1	− 2.8
2020	94.9	− 6.2	94.1	− 5.0	95.1	− 7.6	98.0	− 3.2	105.5	− 9.2	95.4	− 0.7
2020 Nov.	109.2	+ 6.2	113.3	+ 12.5	106.3	+ 2.7	104.6	− 4.6	124.3	− 8.4	97.9	− 2.9
Dec.	98.2	+ 4.8	95.0	+ 12.8	102.1	− 0.3	91.0	+ 1.9	104.1	− 3.0	86.5	+ 4.0
2021 Jan.	102.9	+ 1.5	112.6	+ 6.8	95.4	− 2.7	98.1	− 3.1	111.0	+ 6.3	93.7	− 6.4
Feb.	107.8	+ 6.2	111.9	+ 12.1	105.3	+ 2.9	101.2	− 3.9	108.4	+ 5.7	98.7	− 7.1
Mar.	125.6	+ 30.0	128.9	+ 25.6	125.2	+ 39.7	109.8	+ 0.9	130.5	+ 25.8	102.8	− 7.0
Apr.	110.9	+ 69.1	117.1	+ 59.3	107.0	+ 88.7	101.7	+ 26.8	126.9	+ 93.4	93.2	+ 9.5
May	112.5	+ 50.6	118.5	+ 58.4	109.1	+ 50.3	100.9	+ 14.5	122.0	+ 22.2	93.8	+ 11.4
June	126.3	+ 21.1	125.6	+ 54.5	130.6	+ 3.7	102.0	+ 11.8	118.5	+ 18.0	96.4	+ 9.4
July	126.1	+ 32.5	125.8	+ 34.4	127.1	+ 32.4	121.8	+ 22.9	115.4	+ 10.4	124.0	+ 27.4
Aug.	105.0	+ 18.6	111.3	+ 26.0	99.3	+ 14.1	106.6	+ 6.6	111.0	− 0.3	105.1	+ 9.3
Sep.	109.5	+ 10.1	117.5	+ 23.2	103.6	+ 0.9	102.7	+ 1.0	105.6	− 15.8	101.7	+ 8.5
Oct.	115.1	+ 10.1	124.2	+ 16.3	108.0	+ 5.3	110.2	+ 5.6	105.8	− 11.5	111.7	+ 12.5
Nov. p	116.6	+ 6.8	125.8	+ 11.0	109.2	+ 2.7	114.0	+ 9.0	114.6	− 7.8	113.8	+ 16.2
From abroad												
2017	109.8	+ 8.2	111.9	+ 11.5	108.9	+ 6.9	108.9	+ 6.1	122.8	+ 14.7	104.5	+ 3.4
2018	113.0	+ 2.9	114.6	+ 2.4	112.0	+ 2.8	115.5	+ 6.1	122.2	− 0.5	113.4	+ 8.5
2019	107.7	− 4.7	108.3	− 5.5	106.9	− 4.6	111.5	− 3.5	129.1	+ 5.6	105.9	− 6.6
2020	98.9	− 8.2	101.9	− 5.9	95.9	− 10.3	111.8	+ 0.3	139.6	+ 8.1	102.9	− 2.8
2020 Nov.	117.1	+ 7.6	114.8	+ 8.4	118.5	+ 8.1	114.5	+ 1.1	149.4	+ 6.6	103.3	− 1.1
Dec.	116.5	+ 7.3	108.9	+ 7.1	120.7	+ 6.6	111.8	+ 15.1	153.2	+ 16.9	98.4	+ 14.3
2021 Jan.	115.7	+ 1.8	127.2	+ 8.5	109.5	− 1.9	121.1	+ 3.7	163.5	+ 9.6	107.5	+ 1.1
Feb.	114.1	+ 6.9	122.1	+ 8.7	109.7	+ 7.2	118.9	− 2.1	144.7	+ 6.5	110.6	− 5.3
Mar.	131.6	+ 31.5	138.2	+ 20.7	128.1	+ 40.5	134.8	+ 14.6	160.0	+ 15.6	126.6	+ 14.2
Apr.	123.7	+ 96.7	136.1	+ 69.5	118.4	+ 135.4	118.9	+ 18.9	189.7	+ 79.8	96.1	− 2.1
May	115.6	+ 68.0	127.9	+ 62.5	109.0	+ 80.8	123.2	+ 22.5	185.2	+ 54.2	103.2	+ 9.4
June	125.3	+ 39.5	130.0	+ 42.9	123.3	+ 40.8	123.5	+ 17.8	177.6	+ 40.2	106.0	+ 8.4
July	128.8	+ 32.4	130.6	+ 36.9	127.6	+ 32.0	132.4	+ 19.9	178.1	+ 33.9	117.7	+ 14.2
Aug.	107.6	+ 15.3	120.6	+ 31.8	100.6	+ 8.8	114.8	+ 6.6	148.9	+ 10.7	103.7	+ 4.6
Sep.	131.7	+ 22.2	129.3	+ 19.1	134.0	+ 26.3	122.0	+ 2.3	165.5	+ 1.3	107.9	+ 2.8
Oct.	118.8	+ 5.4	129.5	+ 17.7	112.5	− 0.9	128.2	+ 9.8	173.4	+ 4.8	113.6	+ 12.4
Nov. p	130.2	+ 11.2	139.0	+ 21.1	125.8	+ 6.2	132.4	+ 15.6	185.1	+ 23.9	115.4	+ 11.7

Source of the unadjusted figures: Federal Statistical Office. * At current prices; for explanatory notes, see Statistical Series - Seasonally adjusted business statistics, Tables III.2.a to III.2.c. **o** Using JDemetra+ 2.2.2 (X13).

XI. Economic conditions in Germany

4. Orders received by construction *

Adjusted for working-day variations **o**

Zeit	Total		Breakdown by type of construction										Breakdown by client **1**			
			Structural engineering													
			Total		Residential construction		Industrial construction		Public sector construction		Civil engineering		Industrial clients		Public sector **2**	
	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change
2017	122.4	+ 7.0	123.1	+ 7.0	123.1	+ 5.3	123.4	+ 7.4	121.9	+ 12.0	121.6	+ 6.9	119.8	+ 7.3	125.0	+ 7.8
2018	134.7	+ 10.0	131.1	+ 6.5	136.6	+ 11.0	127.9	+ 3.6	125.2	+ 2.7	138.8	+ 14.1	135.6	+ 13.2	132.4	+ 5.9
2019	146.0	+ 8.4	145.0	+ 10.6	150.1	+ 9.9	142.2	+ 11.2	138.9	+ 10.9	147.1	+ 6.0	147.9	+ 9.1	141.2	+ 6.6
2020	145.7	− 0.2	144.3	− 0.5	160.9	+ 7.2	130.5	− 8.2	141.5	+ 1.9	147.3	+ 0.1	139.7	− 5.5	143.4	+ 1.6
2020 Oct.	142.4	+ 4.0	150.8	+ 9.7	181.5	+ 17.2	127.1	+ 2.2	137.8	+ 6.3	132.6	− 2.6	141.5	+ 4.6	119.6	− 6.5
Nov.	139.6	− 3.9	146.9	− 5.0	167.7	+ 12.0	132.2	− 20.6	133.4	+ 4.9	131.0	− 2.5	143.8	− 14.2	117.6	+ 0.4
Dec.	150.5	+ 1.6	147.8	− 0.8	191.9	+ 7.7	117.9	− 10.1	113.7	− 4.6	153.7	+ 4.4	136.6	− 11.4	141.3	+ 15.0
2021 Jan.	134.0	+ 3.6	140.5	+ 4.8	147.3	+ 7.2	146.0	+ 8.7	97.7	− 20.4	126.5	+ 2.0	150.7	+ 6.8	106.8	− 4.0
Feb.	143.2	+ 6.5	148.8	+ 4.1	161.1	+ 8.6	147.2	+ 4.5	114.1	− 14.3	136.7	+ 9.8	143.4	+ 3.0	132.1	+ 9.5
Mar.	157.5	− 0.8	156.3	+ 1.5	173.8	+ 2.5	141.4	+ 0.1	154.3	+ 2.5	159.0	− 3.3	150.9	− 2.8	155.2	− 0.8
Apr.	160.1	+ 7.0	158.3	+ 18.0	185.1	+ 40.7	139.5	+ 1.6	139.8	+ 7.5	162.3	− 3.2	148.1	+ 5.5	158.8	− 7.2
May	159.2	+ 14.7	163.5	+ 31.9	185.1	+ 26.2	146.8	+ 42.7	154.3	+ 20.5	154.2	− 1.2	150.8	+ 24.3	153.0	− 0.7
June	164.4	− 2.0	164.7	+ 7.6	176.5	+ 7.0	160.3	+ 14.9	142.4	− 13.6	164.0	− 11.2	166.7	+ 15.5	154.4	− 21.3
July	160.0	+ 7.3	168.5	+ 11.0	179.3	+ 13.6	163.7	+ 19.3	150.6	− 19.0	150.2	+ 2.9	158.6	+ 15.9	150.0	− 4.9
Aug.	158.9	+ 16.2	162.4	+ 19.9	167.0	+ 4.6	163.3	+ 43.2	144.0	+ 6.3	154.8	+ 11.9	158.5	+ 21.8	154.4	+ 18.3
Sep.	180.8	+ 19.3	188.6	+ 20.1	190.7	+ 10.0	193.1	+ 36.9	165.2	+ 1.9	171.7	+ 18.3	192.8	+ 31.9	161.0	+ 11.5
Oct.	158.8	+ 11.5	169.0	+ 12.1	169.5	− 6.6	171.7	+ 35.1	157.3	+ 14.2	146.8	+ 10.7	171.6	+ 21.3	137.5	+ 15.0

Source of the unadjusted figures: Federal Statistical Office. * At current prices; excluding value added tax; for explanatory notes, see Statistical Series – Seasonally adjusted business statistics, Table III.2.f. **o** Using JDemetra+ 2.2.2 (X13). **1** Excluding residential construction. **2** Including road construction.

5. Retail trade turnover *

Adjusted for calendar variations **o**

Zeit	Total				of which:											
					In stores by enterprises main product range											
					Food, beverages, tobacco **1**		Textiles, clothing, foodwear and leather goods		Information and communications equipment		Construction and flooring materials, household appliances, furniture		Retail sale of pharmaceutical and medical goods, cosmetic and toilet articles		Retail sale via mail order houses or via internet as well as other retail sale **2**	
	At current prices		At 2015 prices		At current prices											
	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change	2015 = 100	Annual percentage change
2017	107.6	+ 5.0	105.8	+ 3.6	105.9	+ 4.1	108.2	+ 7.2	106.2	+ 6.3	103.0	+ 1.5	107.7	+ 3.7	120.5	+ 10.0
2018	110.7	+ 2.9	107.5	+ 1.6	109.6	+ 3.5	105.6	− 2.4	107.1	+ 0.8	103.1	+ 0.1	112.5	+ 4.5	127.7	+ 6.0
2019	114.9	+ 3.8	111.0	+ 3.3	112.1	+ 2.3	106.7	+ 1.0	108.9	+ 1.7	107.1	+ 3.9	118.7	+ 5.5	138.4	+ 8.4
2020 **3**	121.1	+ 5.4	115.6	+ 4.1	120.9	+ 7.9	81.7	− 23.4	106.2	− 2.5	116.8	+ 9.1	124.3	+ 4.7	168.9	+ 22.0
2020 Nov.	136.7	+ 10.7	130.4	+ 9.9	123.5	+ 7.5	90.4	− 22.0	154.0	+ 15.7	140.3	+ 20.9	133.2	+ 7.2	227.5	+ 38.1
Dec.	137.6	+ 3.3	131.2	+ 2.3	138.0	+ 7.9	69.6	− 41.5	134.5	− 15.5	119.6	+ 5.5	142.0	+ 6.4	218.4	+ 27.1
2021 Jan.	103.9	− 3.7	98.8	− 5.1	116.3	+ 12.2	19.5	− 78.0	62.5	− 45.6	59.6	− 38.3	126.6	+ 3.3	186.6	+ 34.7
Feb.	105.0	− 0.6	99.2	− 2.1	114.6	+ 5.7	22.5	− 72.0	62.9	− 35.8	70.5	− 27.5	127.2	+ 8.8	178.3	+ 40.6
Mar.	129.5	+ 9.2	122.2	+ 7.8	132.6	+ 1.4	58.6	+ 17.4	87.7	+ 4.0	120.1	+ 11.7	134.4	− 2.5	206.4	+ 34.0
Apr.	121.2	+ 9.0	113.7	+ 7.6	125.0	± 0.0	39.2	+ 32.4	69.1	+ 25.9	106.5	+ 5.4	130.1	+ 14.2	193.3	+ 11.5
May	125.7	+ 1.9	117.7	+ 0.1	127.7	+ 0.2	62.1	− 20.7	73.8	− 23.0	112.8	− 11.6	127.4	+ 12.5	200.4	+ 18.5
June	130.0	+ 7.5	122.0	+ 5.5	122.4	+ 2.9	112.6	+ 18.4	97.1	− 5.3	124.5	+ 2.1	130.9	+ 9.7	185.1	+ 13.8
July	126.1	+ 2.9	118.1	+ 0.8	120.7	+ 1.7	102.3	+ 4.8	101.5	− 6.3	120.9	− 3.5	135.1	+ 9.8	162.4	+ 3.8
Aug.	123.1	+ 2.5	115.5	+ 0.6	115.4	− 4.2	99.7	+ 9.6	101.0	− 2.6	116.4	− 0.6	131.4	+ 10.6	169.9	+ 9.2
Sep.	121.4	+ 1.8	113.0	− 0.4	113.1	− 0.5	99.7	− 0.5	99.2	− 4.4	112.5	− 4.4	130.6	+ 7.0	172.4	+ 6.9
Oct.	130.5	+ 1.1	120.9	− 1.5	120.0	− 2.0	112.9	+ 3.7	107.5	− 10.6	123.7	− 4.7	141.7	+ 9.9	193.0	+ 5.6
Nov.	137.8	+ 0.8	127.7	− 2.1	122.3	− 1.0	103.8	+ 14.8	130.0	− 15.6	126.8	− 9.6	139.7	+ 4.9	231.3	+ 1.7

Source of the unadjusted figures: Federal Statistical Office. * Excluding value added tax; for explanatory notes, see Statistical Series - Seasonally adjusted business statistics, Table III.4.c. **o** Using JDemetra+ 2.2.2 (X13). **1** Including stalls and markets. **2** Excluding stores, stalls and markets. **3** As of January 2020 figures are provisional, partially revised, and particularly uncertain in recent months due to estimates for missing reports.

XI. Economic conditions in Germany

6. Labour market *

Period	Employment [1]		Employment subject to social contributions [2]					Solely jobs exempt from social contributions [2]	Short-time workers [3]		Unemployment [4]		Unemployment rate in % [4,5]	Vacancies, thousands [4,6]
			Total		of which:					of which:		of which:		
	Thousands	Annual percentage change	Thousands	Annual percentage change	Production sector	Services excluding temporary employment	Temporary employment		Total	Cyclically induced	Total	Assigned to the legal category of the Third Book of the Social Security Code (SGB III)		
					Thousands									
2017	44,251	+ 1.4	32,234	+ 2.3	9,146	21,980	868	4,742	114	24	2,533	[7] 855	5.7	731
2018	44,858	+ 1.4	32,964	+ 2.3	9,349	22,532	840	4,671	118	25	2,340	802	5.2	796
2019	45,268	+ 0.9	33,518	+ 1.7	9,479	23,043	751	4,579	145	60	[8] 2,267	827	[8] 5.0	774
2020	44,898	− 0.8	33,579	+ 0.2	9,395	23,277	660	4,290	2,939	2,847	2,695	1,137	5.9	613
2021	...	...	...	...	...	...	...	...	...	...	2,613	999	5.7	706
2018 Q4	45,245	+ 1.2	33,452	+ 2.1	9,498	22,890	819	4,627	88	35	2,200	755	4.9	804
2019 Q1	44,906	+ 1.2	33,214	+ 2.0	9,419	22,803	761	4,581	303	34	2,360	892	5.2	780
Q2	45,230	+ 1.0	33,388	+ 1.8	9,455	22,932	750	4,615	51	43	[8] 2,227	778	[8] 4.9	795
Q3	45,378	+ 0.8	33,548	+ 1.5	9,491	23,049	753	4,598	66	58	2,276	827	5.0	794
Q4	45,559	+ 0.7	33,924	+ 1.4	9,551	23,388	738	4,522	161	105	2,204	811	4.8	729
2020 Q1	45,122	+ 0.5	33,642	+ 1.3	9,439	23,284	686	4,458	1,219	949	2,385	960	5.2	683
Q2	44,712	− 1.1	33,415	+ 0.1	9,387	23,137	640	4,235	5,399	5,388	2,770	1,154	6.0	593
Q3	44,794	− 1.3	33,424	− 0.4	9,359	23,171	640	4,273	2,705	2,691	2,904	1,266	6.3	583
Q4	44,965	− 1.3	33,836	− 0.3	9,395	23,518	676	4,194	2,433	2,361	2,722	1,167	5.9	595
2021 Q1	44,451	− 1.5	33,568	− 0.2	9,294	23,376	665	4,051	3,473	3,157	2,878	1,248	6.3	586
Q2	[r] 44,739	[r] + 0.1	33,718	+ 0.9	9,322	23,446	697	4,066	2,164	2,143	2,691	1,024	[9] 5.9	658
Q3	[r] 45,080	[r] + 0.6	[10] 33,928	[10] + 1.5	[10] 9,346	[10] 23,606	[10] 721	[10] 4,170	...	[10] 886	2,545	920	5.5	774
Q4	...	...	...	...	...	...	...	...	...	...	2,341	802	5.1	804
2018 Aug.	44,972	+ 1.3	33,131	+ 2.3	9,412	22,609	856	4,664	41	33	2,351	804	5.2	828
Sep.	45,164	+ 1.2	33,422	+ 2.1	9,496	22,827	842	4,619	42	34	2,256	759	5.0	834
Oct.	45,251	+ 1.3	33,488	+ 2.2	9,515	22,895	827	4,616	46	37	2,204	742	4.9	824
Nov.	45,314	+ 1.3	33,513	+ 2.1	9,513	22,934	822	4,638	51	43	2,186	745	4.8	807
Dec.	45,171	+ 1.2	33,286	+ 2.1	9,434	22,854	773	4,637	166	26	2,210	777	4.9	781
2019 Jan.	44,852	+ 1.2	33,156	+ 2.0	9,405	22,762	763	4,574	354	42	2,406	919	5.3	758
Feb.	44,894	+ 1.2	33,199	+ 2.0	9,416	22,794	758	4,564	310	29	2,373	908	5.3	784
Mar.	44,971	+ 1.1	33,286	+ 1.9	9,442	22,855	749	4,574	246	32	2,301	850	5.1	797
Apr.	45,134	+ 1.1	33,383	+ 1.8	9,457	22,925	753	4,607	49	40	2,229	795	4.9	796
May	45,259	+ 1.0	33,433	+ 1.8	9,462	22,968	749	4,627	53	45	[8] 2,236	772	[8] 4.9	792
June	45,297	+ 0.9	33,407	+ 1.6	9,455	22,948	750	4,646	51	43	2,216	766	4.9	798
July	45,312	+ 0.9	33,360	+ 1.6	9,450	22,901	757	4,644	55	47	2,275	825	5.0	799
Aug.	45,307	+ 0.7	33,610	+ 1.4	9,505	23,101	750	4,568	60	51	2,319	848	5.1	795
Sep.	45,516	+ 0.8	33,938	+ 1.5	9,583	23,341	754	4,517	84	75	2,234	808	4.9	787
Oct.	45,592	+ 0.8	33,966	+ 1.4	9,567	23,398	748	4,510	111	102	2,204	795	4.8	764
Nov.	45,622	+ 0.7	33,968	+ 1.4	9,559	23,423	742	4,532	124	115	2,180	800	4.8	736
Dec.	45,463	+ 0.6	33,740	+ 1.4	9,474	23,344	694	4,531	247	97	2,227	838	4.9	687
2020 Jan.	45,140	+ 0.6	33,608	+ 1.4	9,432	23,255	689	4,471	382	133	2,426	985	5.3	668
Feb.	45,160	+ 0.6	33,624	+ 1.3	9,427	23,278	683	4,461	439	134	2,396	971	5.3	690
Mar.	45,066	+ 0.2	33,648	+ 1.1	9,440	23,290	675	4,350	2,834	2,580	2,335	925	5.1	691
Apr.	44,798	− 0.7	33,430	+ 0.1	9,396	23,141	643	4,194	6,007	5,995	2,644	1,093	5.8	626
May	44,662	− 1.3	33,328	− 0.3	9,367	23,083	624	4,206	5,726	5,715	2,813	1,172	6.1	584
June	44,676	− 1.4	33,323	− 0.3	9,355	23,084	629	4,260	4,464	4,452	2,853	1,197	6.2	570
July	44,687	− 1.4	33,233	− 0.4	9,322	23,024	635	4,302	3,319	3,306	2,910	1,258	6.3	573
Aug.	44,722	− 1.3	33,482	− 0.4	9,367	23,218	642	4,266	2,551	2,537	2,955	1,302	6.4	584
Sep.	44,972	− 1.2	33,792	− 0.4	9,421	23,454	656	4,240	2,244	2,229	2,847	1,238	6.2	591
Oct.	45,054	− 1.2	33,862	− 0.3	9,410	23,530	671	4,229	2,037	2,021	2,760	1,183	6.0	602
Nov.	45,002	− 1.4	33,899	− 0.2	9,400	23,559	696	4,166	2,405	2,386	2,699	1,152	5.9	601
Dec.	44,838	− 1.4	33,700	− 0.1	9,327	23,478	666	4,134	2,856	2,676	2,707	1,166	5.9	581
2021 Jan.	44,430	− 1.6	33,515	− 0.3	9,282	23,347	657	4,045	3,638	3,294	2,901	1,298	6.3	566
Feb.	44,423	− 1.6	33,521	− 0.3	9,281	23,343	662	4,026	3,766	3,358	2,904	1,270	6.3	583
Mar.	44,499	− 1.3	33,636	− 0.0	9,309	23,397	685	4,032	3,016	2,818	2,827	1,177	6.2	609
Apr.	44,606	− 0.4	33,689	+ 0.8	9,324	23,427	687	4,039	2,583	2,560	2,771	1,091	6.0	629
May	[r] 44,724	[r] + 0.1	33,747	+ 1.3	9,326	23,461	703	4,067	2,342	2,320	2,687	1,020	[9] 5.9	654
June	[r] 44,886	[r] + 0.5	33,802	+ 1.4	9,324	23,504	716	4,151	1,568	1,548	2,614	961	5.7	693
July	[r] 44,964	[r] + 0.6	[10] 33,733	[10] + 1.5	[10] 9,304	[10] 23,460	[10] 716	[10] 4,202	...	[10] 1,071	2,590	956	5.6	744
Aug.	[r] 45,012	[r] + 0.6	[10] 33,991	[10] + 1.5	[10] 9,357	[10] 23,656	[10] 724	[10] 4,165	...	[10] 799	2,578	940	5.6	779
Sep.	[r] 45,265	[r] + 0.7	[10] 34,321	[10] + 1.6	[10] 9,432	[10] 23,900	[10] 728	[10] 4,136	...	[10] 788	2,465	864	5.4	799
Oct.	[r] 45,370	[r] + 0.7	[10] 34,366	[10] + 1.5	[10] 9,426	[10] 23,959	[10] 726	[10] 4,142	...	[10] 710	2,377	814	5.2	809
Nov.	[11] 45,405	[11] + 0.9	...	...	...	...	...	...	...	...	2,317	789	5.1	808
Dec.	...	...	...	...	...	...	...	...	...	...	2,330	803	5.1	794

Sources: Federal Statistical Office; Federal Employment Agency. * Annual and quarterly figures: averages; calculated by the Bundesbank; deviations from the official figures are due to rounding. **1** Workplace concept; averages. **2** Monthly figures: end of month. **3** Number within a given month. **4** Mid-month level. **5** Relative to the total civilian labour force. **6** Excluding government-assisted forms of employment and seasonal jobs, including jobs located abroad. **7** From January 2017 persons receiving additional income assistance (unemployment benefit and unemployment benefit II at the same time) shall be assigned to the legal category of the Third Book of the Social Security Code (SGB III). **8** Statistical break due to late recording of unemployed persons in the legal category of the Second Book of the Social Security Code (SGB II). **9** From May 2021, calculated on the basis of new labour force figures. **10** Unadjusted figures estimated by the Federal Employment Agency. In 2019 and 2020, the estimated values for Germany deviated from the final data by a maximum of 0.1% for employees subject to social contributions, by a maximum of 0.9% for persons solely in jobs exempt from social contributions, and by a maximum of 55.3% for cyclically induced short-time work. **11** Initial preliminary estimate by the Federal Statistical Office.

XI. Economic conditions in Germany

7. Prices

Period	Harmonised Index of Consumer Prices						Memo item: Consumer price index (national concept)	Construction price index	Index of producer prices of industrial products sold on the domestic market [3]	Index of producer prices of agricultural products [3]	Indices of foreign trade prices		HWWI Index of World Market Prices of Raw Materials [4]	
	Total	of which: [1] Food [2]	Non-energy industrial goods	Energy	Services	of which: Actual rents for housing					Exports	Imports	Energy [5]	Other raw materials [6]
	2015 = 100												2020 = 100	
Index level														
2018	104.0	106.7	103.0	102.3	104.2	104.6	103.8	110.2	103.7	109.0	101.9	102.7	174.1	99.9
2019	105.5	108.4	104.2	103.7	105.7	106.1	105.3	115.3	104.8	111.5	102.4	101.7	150.2	98.7
2020	[7] 105.8	[7] 110.9	[7] 104.1	[7] 99.0	[7] 106.9	107.6	[7] 105.8	[7] 117.0	103.8	108.0	101.7	97.3	100.0	100.0
2021	[7] 109.2	[7] 114.1	[7] 106.7	[7] 109.0	[7] 109.0	109.0	[7] 109.1	[7] 127.0	114.7	...	...	...	220.7	137.6
2020 Feb.	105.7	111.2	104.3	103.9	105.2	107.1	105.6	117.8	104.9	114.1	102.6	100.4	126.0	100.1
Mar.	105.8	111.0	105.2	101.6	105.5	107.3	105.7		104.1	113.7	101.9	96.9	83.9	95.8
Apr.	106.2	112.2	105.4	98.6	106.7	107.4	106.1		103.4	112.7	101.5	95.2	67.5	92.6
May	106.2	112.5	105.4	97.4	106.7	107.5	106.0	118.3	103.0	109.1	101.3	95.5	74.0	92.9
June	106.9	112.7	104.8	98.7	108.1	107.6	106.6		103.0	110.0	101.3	96.1	85.9	94.1
July	[7] 106.4	[7] 110.2	[7] 102.5	[7] 98.0	[7] 109.4	107.7	[7] 106.1		103.2	107.5	101.3	96.4	90.6	95.8
Aug.	[7] 106.2	[7] 110.1	[7] 102.6	[7] 97.6	[7] 109.0	107.8	[7] 106.0	[7] 115.7	103.2	104.8	101.2	96.5	95.8	98.4
Sep.	[7] 105.8	[7] 109.9	[7] 103.6	[7] 96.9	[7] 108.0	107.8	[7] 105.8		103.6	103.5	101.3	96.8	97.1	103.5
Oct.	[7] 105.8	[7] 110.2	[7] 103.9	[7] 97.0	[7] 107.6	108.0	[7] 105.9		103.7	103.8	101.4	97.1	103.3	104.9
Nov.	[7] 104.7	[7] 110.3	[7] 104.0	[7] 96.0	[7] 105.5	108.1	[7] 105.0	[7] 116.0	103.9	103.9	101.8	97.6	109.5	107.1
Dec.	[7] 105.3	[7] 109.9	[7] 103.4	[7] 97.4	[7] 106.9	108.2	[7] 105.5		104.7	104.2	101.9	98.2	121.8	112.3
2021 Jan.	106.8	112.3	105.1	102.6	106.9	108.4	106.3		106.2	[8] 106.7	102.8	100.1	141.6	120.6
Feb.	107.4	113.0	105.5	104.1	107.3	108.5	107.0	121.2	106.9	108.9	103.3	101.8	146.0	124.7
Mar.	107.9	113.1	105.7	106.2	107.6	108.6	107.5		107.9	114.0	104.1	103.6	150.3	130.4
Apr.	108.4	114.5	105.8	106.1	108.3	108.7	108.2		108.8	115.9	104.9	105.0	154.1	134.3
May	108.7	114.2	106.3	106.7	108.7	108.9	108.7	125.1	110.4	118.5	105.6	106.8	168.3	144.9
June	109.1	114.1	106.5	107.6	109.1	108.9	109.1		111.8	117.7	106.4	108.5	183.0	142.3
July	[7] 109.7	[7] 114.4	[7] 106.4	[7] 109.0	[7] 110.2	109.1	[7] 110.1		113.9	117.3	107.7	110.9	204.8	141.9
Aug.	[7] 109.8	[7] 114.4	[7] 106.5	[7] 109.4	[7] 110.3	109.2	[7] 110.1	[7] 129.4	115.6	118.8	108.5	112.4	217.6	138.9
Sep.	[7] 110.1	[7] 114.4	[7] 107.6	[7] 110.1	[7] 109.9	109.3	[7] 110.1		118.3	117.4	109.5	113.9	256.1	136.3
Oct.	[7] 110.7	[7] 114.5	[7] 108.0	[7] 114.6	[7] 110.0	109.5	[7] 110.7		122.8	120.6	111.0	118.2	352.7	143.0
Nov.	[7] 111.0	[7] 114.9	[7] 108.4	[7] 116.7	[7] 109.5	109.5	[7] 110.5	[7] 132.2	123.8	125.5	111.9	121.7	304.4	143.0
Dec.	[7] 111.3	[7] 115.7	[7] 108.6	[7] 115.0	[7] 110.3	109.6	[7] 111.1		130.0	...	...	...	352.9	148.3
Annual percentage change														
2018	+ 1.9	+ 2.6	+ 0.8	+ 4.9	+ 1.6	+ 1.6	+ 1.8	+ 4.7	+ 2.6	+ 0.4	+ 1.2	+ 2.6	+ 25.4	+ 0.3
2019	+ 1.4	+ 1.6	+ 1.1	+ 1.4	+ 1.5	+ 1.5	+ 1.4	+ 4.7	+ 1.1	+ 2.3	+ 0.5	− 1.0	− 13.7	− 1.2
2020	[7] + 0.4	[7] + 2.3	[7] − 0.1	[7] − 4.5	[7] + 1.2	+ 1.4	[7] + 0.5	[7] + 1.4	− 1.0	− 3.1	− 0.7	− 4.3	− 33.4	+ 1.3
2021	[7] + 3.2	[7] + 2.9	[7] + 2.5	[7] +10.1	[7] + 2.0	+ 1.3	[7] + 3.1	[7] + 8.6	+ 10.5	...	...	...	+ 120.7	+ 37.6
2020 Feb.	+ 1.7	+ 3.1	+ 0.9	+ 2.2	+ 1.5	+ 1.4	+ 1.7	+ 3.3	− 0.1	+ 1.9	+ 0.3	− 2.0	− 20.6	− 0.1
Mar.	+ 1.3	+ 3.1	+ 1.3	− 0.8	+ 1.3	+ 1.5	+ 1.4		− 0.8	+ 0.4	− 0.5	− 5.5	− 46.8	− 3.6
Apr.	+ 0.8	+ 4.0	+ 0.8	− 5.6	+ 1.3	+ 1.5	+ 0.9		− 1.9	− 2.5	− 1.1	− 7.4	− 58.1	− 6.7
May	+ 0.5	+ 3.9	+ 0.8	− 8.2	+ 1.3	+ 1.5	+ 0.6	+ 2.9	− 2.2	− 5.7	− 1.2	− 7.0	− 52.8	− 4.2
June	+ 0.8	+ 4.0	+ 0.7	− 5.9	+ 1.4	+ 1.4	+ 0.9		− 1.8	− 4.4	− 1.0	− 5.1	− 37.8	− 4.5
July	[7] ± 0.0	[7] + 1.4	[7] − 0.8	[7] − 6.4	[7] + 1.4	+ 1.4	[7] − 0.1		− 1.7	− 5.9	− 1.1	− 4.6	− 36.1	− 5.1
Aug.	[7] − 0.1	[7] + 1.2	[7] − 0.8	[7] − 6.0	[7] + 1.1	+ 1.4	[7] ± 0.0	[7] − 0.1	− 1.2	− 6.8	− 1.1	− 4.0	− 29.3	+ 2.3
Sep.	[7] − 0.4	[7] + 1.0	[7] − 1.1	[7] − 6.6	[7] + 1.0	+ 1.3	[7] − 0.2		− 1.0	− 5.8	− 1.1	− 4.3	− 32.3	+ 5.9
Oct.	[7] − 0.5	[7] + 1.5	[7] − 1.0	[7] − 6.6	[7] + 0.7	+ 1.3	[7] − 0.2		− 0.7	− 5.9	− 1.0	− 3.9	− 29.1	+ 7.0
Nov.	[7] − 0.7	[7] + 1.2	[7] − 1.1	[7] − 7.4	[7] + 0.6	+ 1.3	[7] − 0.3	[7] − 0.3	− 0.5	− 7.2	− 0.6	− 3.8	− 28.0	+ 8.4
Dec.	[7] − 0.7	[7] + 0.6	[7] − 1.6	[7] − 6.0	[7] + 0.8	+ 1.3	[7] − 0.3		+ 0.2	− 8.9	− 0.6	− 3.4	− 20.8	+ 11.1
2021 Jan.	+ 1.6	+ 2.0	+ 1.1	− 2.2	+ 2.5	+ 1.3	+ 1.0		+ 0.9	[8] − 5.7	+ 0.1	− 1.2	− 2.2	+ 17.7
Feb.	+ 1.6	+ 1.6	+ 1.2	+ 0.2	+ 2.0	+ 1.3	+ 1.3	+ 2.9	+ 1.9	− 4.6	+ 0.7	+ 1.4	+ 15.9	+ 24.6
Mar.	+ 2.0	+ 1.9	+ 0.5	+ 4.5	+ 2.0	+ 1.2	+ 1.7		+ 3.7	+ 0.3	+ 2.2	+ 6.9	+ 79.1	+ 36.1
Apr.	+ 2.1	+ 2.0	+ 0.4	+ 7.6	+ 1.5	+ 1.2	+ 2.0		+ 5.2	+ 2.8	+ 3.3	+ 10.3	+ 128.3	+ 45.0
May	+ 2.4	+ 1.5	+ 0.9	+ 9.5	+ 1.9	+ 1.3	+ 2.5	+ 5.7	+ 7.2	+ 8.6	+ 4.2	+ 11.8	+ 127.4	+ 56.0
June	+ 2.1	+ 1.2	+ 1.6	+ 9.0	+ 0.9	+ 1.2	+ 2.3		+ 8.5	+ 7.0	+ 5.0	+ 12.9	+ 113.0	+ 51.2
July	[7] + 3.1	[7] + 3.8	[7] + 3.8	[7] +11.2	[7] + 0.7	+ 1.3	[7] + 3.8		+ 10.4	+ 9.1	+ 6.3	+ 15.0	+ 126.0	+ 48.1
Aug.	[7] + 3.4	[7] + 3.9	[7] + 3.8	[7] +12.1	[7] + 1.2	+ 1.3	[7] + 3.9	[7] + 11.8	+ 12.0	+ 13.4	+ 7.2	+ 16.5	+ 127.1	+ 41.2
Sep.	[7] + 4.1	[7] + 4.1	[7] + 3.9	[7] +13.6	[7] + 1.8	+ 1.4	[7] + 4.1		+ 14.2	+ 13.4	+ 8.1	+ 17.7	+ 163.7	+ 31.7
Oct.	[7] + 4.6	[7] + 3.9	[7] + 3.9	[7] +18.1	[7] + 2.2	+ 1.4	[7] + 4.5		+ 18.4	+ 16.2	+ 9.5	+ 21.7	+ 241.4	+ 36.3
Nov.	[7] + 6.0	[7] + 4.2	[7] + 4.2	[7] +21.6	[7] + 3.8	+ 1.3	[7] + 5.2	[7] + 14.0	+ 19.2	+ 20.8	+ 9.9	+ 24.7	+ 178.0	+ 33.5
Dec.	[7] + 5.7	[7] + 5.3	[7] + 5.0	[7] +18.1	[7] + 3.2	+ 1.3	[7] + 5.3		+ 24.2	...	...	...	+ 189.7	+ 32.1

Sources: Eurostat; Federal Statistical Office and Bundesbank calculation based on data from the Federal Statistical Office; for the Index of World Market Prices of Raw Materials: HWWI. **1** Deviations from the official figures are due to rounding. **2** Including alcoholic beverages and tobacco. **3** Excluding value added tax. **4** For the euro area, in euro. **5** Coal, crude oil (Brent) and natural gas. **6** Food, beverages and tobacco as well as industrial raw materials. **7** Influenced by a temporary reduction of value added tax between July and December 2020. **8** From January 2021 onwards provisional figures.

XI. Economic conditions in Germany

8. Households' income *

Period	Gross wages and salaries [1]		Net wages and salaries [2]		Monetary social benefits received [3]		Mass income [4]		Disposable income [5]		Saving [6]		Saving ratio [7]
	€ billion	Annual percentage change	€ billion	Annual percentage change	€ billion	Annual percentage change	€ billion	Annual percentage change	€ billion	Annual percentage change	€ billion	Annual percentage change	As percentage
2014	1,234.2	4.0	830.5	3.9	394.0	2.6	1,224.5	3.5	1,734.5	2.6	170.6	8.6	9.8
2015	1,285.5	4.2	863.3	4.0	410.5	4.2	1,273.8	4.0	1,782.3	2.8	179.4	5.1	10.1
2016	1,337.4	4.0	896.3	3.8	426.2	3.8	1,322.5	3.8	1,841.5	3.3	187.8	4.7	10.2
2017	1,395.4	4.3	932.5	4.0	441.8	3.6	1,374.3	3.9	1,905.2	3.5	202.8	8.0	10.6
2018	1,462.6	4.8	976.3	4.7	454.3	2.8	1,430.6	4.1	1,975.8	3.7	223.7	10.3	11.3
2019	1,524.1	4.2	1,022.0	4.7	474.4	4.4	1,496.4	4.6	2,021.6	2.3	218.7	– 2.2	10.8
2020	1,514.1	– 0.7	1,021.3	– 0.1	518.8	9.4	1,540.1	2.9	2,035.1	0.7	327.1	49.6	16.1
2020 Q2	355.9	– 4.4	234.8	– 3.8	130.4	11.3	365.2	1.1	491.7	– 1.5	97.4	92.3	19.8
Q3	374.1	– 1.2	258.1	– 0.6	132.0	10.2	390.1	2.8	508.1	0.7	66.5	44.4	13.1
Q4	417.9	0.1	282.1	1.1	131.3	10.4	413.3	3.9	514.9	0.7	78.9	60.6	15.3
2021 Q1	362.0	– 1.1	245.1	– 0.5	136.8	9.4	381.8	2.8	517.2	– 0.6	113.9	35.2	22.0
Q2	377.1	6.0	250.8	6.8	134.6	3.2	385.4	5.5	509.9	3.7	83.0	– 14.8	16.3
Q3	391.3	4.6	270.1	4.6	131.1	– 0.7	401.1	2.8	521.8	2.7	56.0	– 15.8	10.7

Source: Federal Statistical Office; figures computed in November 2021. * Households including non-profit institutions serving households. **1** Residence concept. **2** After deducting the wage tax payable on gross wages and salaries and employees' contributions to the social security funds. **3** Social security benefits in cash from the social security funds, central, state and local government and foreign countries, pension payments (net), private funded social benefits, less social contributions on social benefits, consumption-related taxes and public charges. **4** Net wages and salaries plus monetary social benefits received. **5** Mass income plus operating surplus, mixed income, property income (net), other current transfers received, income of non-profit institutions serving households, less taxes (excluding wage tax and consumption-related taxes) and other current transfers paid. Including the increase in claims on company pension funds. **6** Including the increase in claims on company pension funds. **7** Saving as a percentage of disposable income.

9. Negotiated pay rates (overall economy)

Period	Index of negotiated wages [1]								Memo item: Wages and salaries per employee [3]	
	On an hourly basis		On a monthly basis							
			Total		Total excluding one-off payments		Basic pay rates [2]			
	2015=100	Annual percentage change	2015=100	Annual percentage change	2015=100	Annual percentage change	2015=100	Annual percentage change	2015=100	Annual percentage change
2014	97.7	3.1	97.8	2.9	97.7	2.8	97.6	2.8	97.2	2.9
2015	100.0	2.4	100.0	2.3	100.0	2.3	100.0	2.4	100.0	2.9
2016	102.1	2.1	102.1	2.1	102.1	2.1	102.2	2.2	102.5	2.5
2017	104.2	2.1	104.2	2.0	104.3	2.1	104.5	2.3	105.1	2.6
2018	107.1	2.8	107.1	2.8	107.0	2.6	107.3	2.7	108.5	3.2
2019	110.2	2.9	110.2	2.9	109.7	2.5	110.0	2.5	111.7	3.0
2020	112.6	2.2	112.6	2.2	111.9	2.0	112.2	2.0	111.5	– 0.1
2020 Q2	105.0	2.0	105.0	1.9	105.1	2.2	112.1	2.1	105.4	– 3.5
Q3	116.2	1.8	116.2	1.8	114.5	1.8	112.5	1.8	110.7	– 0.2
Q4	125.1	2.7	125.1	2.7	124.0	1.8	112.6	1.8	122.8	1.2
2021 Q1	105.8	1.5	105.7	1.5	105.8	1.5	113.3	1.5	107.5	0.1
Q2	107.4	2.3	107.4	2.3	106.5	1.4	113.8	1.5	111.3	5.6
Q3	117.4	1.0	117.4	1.0	116.1	1.4	114.1	1.4	114.8	3.7
2021 May	106.4	1.1	106.4	1.1	106.5	1.1	113.8	1.5	.	.
June	108.9	4.0	108.9	4.0	106.3	1.5	113.9	1.4	.	.
July	138.5	– 0.0	138.5	– 0.0	135.0	1.2	114.0	1.3	.	.
Aug.	107.0	1.7	107.0	1.7	106.6	1.5	114.1	1.4	.	.
Sep.	106.7	1.7	106.7	1.7	106.8	1.7	114.3	1.6	.	.
Oct.	108.5	3.3	108.5	3.3	106.9	1.8	114.5	1.7	.	.
Nov.	163.3	1.7	163.2	1.7	163.4	2.2	114.7	1.8	.	.

1 Current data are normally revised on account of additional reports. **2** Excluding one-off payments and covenants (capital formation benefits, special payments, such as annual bonuses, holiday pay, Christmas bonuses (13th monthly salary payment) and retirement provisions). **3** Source: Federal Statistical Office; figures computed in November 2021.

XI. Economic conditions in Germany

10. Assets, equity and liabilities of listed non-financial groups *

End of year/half

Period	Assets									Equity and liabilities						
			of which:				of which:				Liabilities					
												Long-term		Short-term		
															of which:	
	Total assets	Non-current assets	Intangible assets	Tangible assets	Financial assets	Current assets	Inventories	Trade receivables	Cash 1	Equity	Total	Total	of which: Financial debt	Total	Financial debt	Trade payables
Total (€ billion)																
2017	2,395.6	1,487.8	498.6	602.4	295.9	907.8	230.6	225.0	156.1	756.7	1,638.9	866.3	495.7	772.6	236.1	195.5
2018 3	2,589.0	1,536.7	540.8	610.8	288.5	1,052.3	249.5	234.7	172.6	789.8	1,799.2	925.7	558.7	873.4	257.5	205.0
2019	2,800.6	1,769.7	586.3	737.1	333.4	1,030.9	257.5	237.6	168.4	821.0	1,979.6	1,091.2	676.3	888.4	289.8	207.6
2020	2,850.0	1,797.3	607.5	733.1	335.1	1,052.7	243.6	225.9	240.5	811.5	2,038.5	1,181.5	746.3	857.0	304.4	196.1
2019 H2	2,800.6	1,769.7	586.3	737.1	333.4	1,030.9	257.5	237.6	168.4	821.0	1,979.6	1,091.2	676.3	888.4	289.8	207.6
2020 H1	2,891.4	1,800.9	625.0	734.0	319.7	1,090.5	257.6	216.4	220.7	793.7	2,097.7	1,183.8	754.2	913.9	335.5	179.7
H2	2,850.0	1,797.3	607.5	733.1	335.1	1,052.7	243.6	225.9	240.5	811.5	2,038.5	1,181.5	746.3	857.0	304.4	196.1
2021 H1 p	3,017.6	1,877.0	649.3	745.0	343.7	1,140.6	256.2	273.2	240.8	906.9	2,110.7	1,178.6	751.9	932.1	297.4	206.9
	As a percentage of total assets															
2017	100.0	62.1	20.8	25.2	12.4	37.9	9.6	9.4	6.5	31.6	68.4	36.2	20.7	32.3	9.9	8.2
2018 3	100.0	59.4	20.9	23.6	11.1	40.6	9.6	9.1	6.7	30.5	69.5	35.8	21.6	33.7	10.0	7.9
2019	100.0	63.2	20.9	26.3	11.9	36.8	9.2	8.5	6.0	29.3	70.7	39.0	24.2	31.7	10.4	7.4
2020	100.0	63.1	21.3	25.7	11.8	36.9	8.6	7.9	8.4	28.5	71.5	41.5	26.2	30.1	10.7	6.9
2019 H2	100.0	63.2	20.9	26.3	11.9	36.8	9.2	8.5	6.0	29.3	70.7	39.0	24.2	31.7	10.4	7.4
2020 H1	100.0	62.3	21.6	25.4	11.1	37.7	8.9	7.5	7.6	27.5	72.6	40.9	26.1	31.6	11.6	6.2
H2	100.0	63.1	21.3	25.7	11.8	36.9	8.6	7.9	8.4	28.5	71.5	41.5	26.2	30.1	10.7	6.9
2021 H1 p	100.0	62.2	21.5	24.7	11.4	37.8	8.5	9.1	8.0	30.1	70.0	39.1	24.9	30.9	9.9	6.9
Groups with a focus on the production sector (€ billion) 2																
2017	1,988.8	1,190.4	351.5	483.6	281.8	798.3	215.7	181.3	128.5	609.5	1,379.3	719.1	397.8	660.2	218.4	150.0
2018 3	2,149.3	1,215.4	388.1	472.9	277.5	933.9	234.5	188.6	139.2	636.7	1,512.6	760.2	442.4	752.3	236.2	152.5
2019	2,302.9	1,396.4	419.6	565.4	319.7	906.5	243.8	188.5	136.8	662.2	1,640.7	887.5	523.8	753.2	257.5	158.0
2020	2,265.0	1,354.9	399.0	543.5	320.0	910.1	228.7	179.5	187.9	636.2	1,628.7	904.7	536.9	724.0	267.3	149.8
2019 H2	2,302.9	1,396.4	419.6	565.4	319.7	906.5	243.8	188.5	136.8	662.2	1,640.7	887.5	523.8	753.2	257.5	158.0
2020 H1	2,304.8	1,351.9	406.4	547.1	303.3	952.9	243.9	171.5	171.3	614.6	1,690.2	912.1	548.4	778.0	294.6	137.0
H2	2,265.0	1,354.9	399.0	543.5	320.0	910.1	228.7	179.5	187.9	636.2	1,628.7	904.7	536.9	724.0	267.3	149.8
2021 H1 p	2,392.8	1,398.3	416.6	551.0	322.5	994.6	240.6	221.9	192.4	703.5	1,689.4	892.3	532.0	797.1	261.3	162.1
	As a percentage of total assets															
2017	100.0	59.9	17.7	24.3	14.2	40.1	10.9	9.1	6.5	30.7	69.4	36.2	20.0	33.2	11.0	7.5
2018 3	100.0	56.6	18.1	22.0	12.9	43.5	10.9	8.8	6.5	29.6	70.4	35.4	20.6	35.0	11.0	7.1
2019	100.0	60.6	18.2	24.6	13.9	39.4	10.6	8.2	5.9	28.8	71.3	38.5	22.7	32.7	11.2	6.9
2020	100.0	59.8	17.6	24.0	14.1	40.2	10.1	7.9	8.3	28.1	71.9	39.9	23.7	32.0	11.8	6.6
2019 H2	100.0	60.6	18.2	24.6	13.9	39.4	10.6	8.2	5.9	28.8	71.3	38.5	22.7	32.7	11.2	6.9
2020 H1	100.0	58.7	17.6	23.7	13.2	41.3	10.6	7.4	7.4	26.7	73.3	39.6	23.8	33.8	12.8	6.0
H2	100.0	59.8	17.6	24.0	14.1	40.2	10.1	7.9	8.3	28.1	71.9	39.9	23.7	32.0	11.8	6.6
2021 H1 p	100.0	58.4	17.4	23.0	13.5	41.6	10.1	9.3	8.0	29.4	70.6	37.3	22.2	33.3	10.9	6.8
Groups with a focus on the services sector (€ billion)																
2017	406.9	297.4	147.1	118.8	14.1	109.5	14.8	43.6	27.6	147.2	259.6	147.3	97.9	112.4	17.6	45.5
2018 3	439.7	321.3	152.7	137.9	11.0	118.3	14.9	46.1	33.3	153.1	286.6	165.5	116.3	121.1	21.3	52.5
2019	497.7	373.3	166.7	171.8	13.7	124.4	13.7	49.1	31.6	158.8	338.9	203.8	152.6	135.1	32.3	49.6
2020	585.0	442.4	208.5	189.6	15.1	142.6	14.9	46.4	52.6	175.3	409.7	276.7	209.4	133.0	37.1	46.3
2019 H2	497.7	373.3	166.7	171.8	13.7	124.4	13.7	49.1	31.6	158.8	338.9	203.8	152.6	135.1	32.3	49.6
2020 H1	586.6	449.0	218.7	186.8	16.3	137.6	13.7	44.9	49.4	179.1	407.6	271.7	205.7	135.9	40.9	42.6
H2	585.0	442.4	208.5	189.6	15.1	142.6	14.9	46.4	52.6	175.3	409.7	276.7	209.4	133.0	37.1	46.3
2021 H1 p	624.7	478.7	232.6	194.1	21.2	146.1	15.5	51.4	48.4	203.4	421.3	286.4	219.9	135.0	36.1	44.8
	As a percentage of total assets															
2017	100.0	73.1	36.2	29.2	3.5	26.9	3.7	10.7	6.8	36.2	63.8	36.2	24.1	27.6	4.3	11.2
2018 3	100.0	73.1	34.7	31.4	2.5	26.9	3.4	10.5	7.6	34.8	65.2	37.6	26.5	27.6	4.8	11.9
2019	100.0	75.0	33.5	34.5	2.8	25.0	2.8	9.9	6.4	31.9	68.1	41.0	30.7	27.2	6.5	10.0
2020	100.0	75.6	35.6	32.4	2.6	24.4	2.6	7.9	9.0	30.0	70.0	47.3	35.8	22.7	6.3	7.9
2019 H2	100.0	75.0	33.5	34.5	2.8	25.0	2.8	9.9	6.4	31.9	68.1	41.0	30.7	27.2	6.5	10.0
2020 H1	100.0	76.5	37.3	31.9	2.8	23.5	2.3	7.7	8.4	30.5	69.5	46.3	35.1	23.2	7.0	7.3
H2	100.0	75.6	35.6	32.4	2.6	24.4	2.6	7.9	9.0	30.0	70.0	47.3	35.8	22.7	6.3	7.9
2021 H1 p	100.0	76.6	37.2	31.1	3.4	23.4	2.5	8.2	7.8	32.6	67.4	45.8	35.2	21.6	5.8	7.2

***** Non-financial groups admitted to the Prime Standard segment of the Frankfurt Stock Exchange which publish IFRS consolidated financial statements on a quarterly or half-yearly basis and make a noteworthy contribution to value added in Germany. Excluding groups engaged in real estate activities. **1** Including cash equivalents. **2** Including groups in agriculture and forestry. **3** From H1 2018 or 2018 onwards: significant changes in IFRS standards, impairing comparability with previous periods.

XI. Economic conditions in Germany

11. Revenues and operating income of listed non-financial groups *

Period	Revenues		Operating income before depreciation and amortisation (EBITDA 1)		Operating income before depreciation and amortisation (EBITDA 1) as a percentage of revenues					Operating income (EBIT)		Operating income (EBIT) as a percentage of revenues				
					Weighted average		Distribution 2					Weighted average		Distribution 2		
							First quartile	Median	Third quartile					First quartile	Median	Third quartile
	€ billion 3	Annual percentage change 4	€ billion 3	Annual percentage change 4	%	Annual change in percentage points 4	%	%	%	€ billion 3	Annual percentage change 4	%	Annual change in percentage points 4	%	%	%
Total																
2013	1,539.8	– 0.7	187.0	– 2.8	12.1	– 0.3	5.1	10.3	18.5	99.4	5.5	6.5	0.4	1.9	5.9	11.1
2014	1,564.3	1.0	198.7	5.0	12.7	0.5	5.9	10.3	17.4	109.3	8.6	7.0	0.5	1.9	6.2	11.1
2015	1,633.9	6.9	195.9	– 1.1	12.0	– 1.0	6.3	10.6	17.8	91.5	– 16.4	5.6	– 1.5	1.8	6.7	11.3
2016	1,624.3	– 0.4	214.4	7.8	13.2	1.0	6.7	11.4	17.9	111.7	9.0	6.9	0.5	2.6	6.7	12.0
2017	1,719.3	5.1	243.4	14.6	14.2	1.2	7.0	11.0	18.0	141.9	33.3	8.3	1.8	2.5	6.8	12.1
2018 6	1,706.8	0.7	232.8	– 0.9	13.6	– 0.2	6.1	10.6	17.8	129.2	– 6.3	7.6	– 0.6	2.1	6.5	11.9
2019	1,764.6	2.6	233.6	0.4	13.2	– 0.3	6.9	12.2	19.2	105.5	– 17.9	6.0	– 1.5	1.6	5.8	11.8
2020	1,632.8	– 8.8	213.6	– 7.7	13.1	0.2	6.5	11.5	17.9	52.1	– 41.0	3.2	– 2.1	– 0.8	4.9	10.5
2016 H2	842.4	1.1	102.9	9.8	12.2	1.0	6.9	11.9	19.0	46.3	21.0	5.5	0.8	3.0	7.5	12.5
2017 H1	843.9	6.7	125.7	14.6	14.9	1.0	5.7	10.1	17.1	78.4	29.6	9.3	1.6	1.8	5.8	11.6
H2	878.5	3.5	117.4	14.6	13.4	1.3	6.9	12.0	19.2	63.0	38.2	7.2	1.8	3.2	7.4	12.4
2018 H1 6	848.2	– 0.1	120.8	– 2.1	14.2	– 0.3	5.1	10.6	18.2	72.7	– 5.3	8.6	– 0.5	1.7	6.4	12.5
H2	869.4	1.4	114.4	0.5	13.2	– 0.1	6.3	11.2	18.0	58.0	– 7.6	6.7	– 0.6	2.1	6.8	12.5
2019 H1	861.3	2.7	112.3	– 4.0	13.0	– 0.9	6.5	11.8	18.6	53.4	– 23.3	6.2	– 2.1	1.5	5.7	11.7
H2	903.7	2.4	121.3	4.8	13.4	0.3	6.6	11.8	20.0	52.0	– 11.4	5.8	– 0.9	0.8	6.1	12.5
2020 H1	744.5	– 14.4	78.2	– 34.1	10.5	– 3.0	4.8	9.9	16.7	7.9	– 88.0	1.1	– 5.3	– 2.1	3.5	8.8
H2	888.4	– 3.3	135.4	17.1	15.2	2.8	7.6	13.2	19.8	44.2	8.7	5.0	0.7	1.7	6.5	11.6
2021 H1 p	919.8	20.1	152.4	88.0	16.6	6.0	7.4	12.6	19.5	85.4	.	9.3	8.3	2.3	7.8	12.2
Groups with a focus on the production sector 5																
2013	1,198.8	– 0.8	142.6	– 2.5	11.9	– 0.2	5.1	10.3	16.0	77.4	– 5.8	6.5	– 0.3	1.6	5.8	10.5
2014	1,220.0	1.0	152.2	5.9	12.5	0.6	5.8	10.1	15.5	85.2	9.8	7.0	0.6	1.7	6.0	10.6
2015	1,309.7	7.0	149.0	– 2.6	11.4	– 1.1	6.3	10.5	16.3	69.1	– 19.7	5.3	– 1.8	2.2	6.6	10.4
2016	1,295.9	– 0.8	161.9	6.3	12.5	0.8	6.5	10.6	16.0	84.8	4.2	6.5	0.3	2.8	6.3	10.5
2017	1,395.9	5.5	187.5	16.6	13.4	1.3	7.1	11.0	15.8	112.5	40.6	8.1	2.0	3.2	6.7	10.4
2018 6	1,367.7	1.0	175.7	– 1.5	12.9	– 0.3	6.9	10.7	16.0	100.7	– 7.1	7.4	– 0.6	2.8	6.9	11.4
2019	1,410.9	2.0	168.1	– 4.4	11.9	– 0.8	6.9	11.3	16.6	76.3	– 23.8	5.4	– 1.8	1.4	5.7	10.1
2020	1,285.2	– 9.4	143.6	– 8.6	11.2	0.1	5.7	10.6	16.5	29.1	– 48.1	2.3	– 2.3	– 0.7	4.3	9.8
2016 H2	670.8	0.6	75.4	12.1	11.2	1.1	6.2	11.3	16.7	32.1	34.4	4.8	0.9	2.4	6.3	10.8
2017 H1	695.1	7.3	101.5	18.7	14.6	1.4	6.0	10.1	16.1	66.3	37.3	9.5	2.1	2.3	5.8	10.8
H2	701.4	3.7	86.0	14.2	12.3	1.1	7.0	11.7	16.9	46.2	45.5	6.6	1.9	3.6	7.2	10.8
2018 H1 6	681.9	– 0.1	94.9	– 3.4	13.9	– 0.5	7.0	10.9	16.7	60.0	– 5.9	8.8	– 0.6	2.9	6.8	11.5
H2	695.4	2.1	83.1	0.7	12.0	– 0.2	6.2	11.1	16.2	42.1	– 8.7	6.1	– 0.7	2.0	6.4	11.4
2019 H1	689.9	2.4	83.3	– 8.8	12.1	– 1.5	7.1	10.9	16.1	41.9	– 26.8	6.1	– 2.4	1.8	6.0	9.5
H2	721.0	1.7	84.8	0.3	11.8	– 0.2	6.1	10.8	16.9	34.4	– 19.7	4.8	– 1.3	0.6	5.2	11.1
2020 H1	580.6	– 16.0	49.0	– 42.4	8.4	– 3.8	4.4	8.8	14.9	0.2	– 101.7	0.0	– 6.2	– 2.1	3.1	7.8
H2	704.6	– 3.0	94.6	25.4	13.4	3.4	7.0	12.1	18.6	28.9	19.7	4.1	1.1	0.3	6.0	10.5
2021 H1 p	731.9	23.8	112.1	128.5	15.3	7.0	8.2	12.6	18.6	67.7	.	9.3	9.4	2.9	7.9	12.1
Groups with a focus on the services sector																
2013	341.0	– 0.1	44.4	– 3.5	13.0	– 0.5	5.2	9.3	20.7	21.9	82.2	6.4	2.9	2.4	5.9	11.8
2014	344.2	0.8	46.5	1.8	13.5	0.1	6.0	12.3	22.6	24.1	4.3	7.0	0.2	2.6	6.3	13.7
2015	324.1	6.1	46.9	4.0	14.5	– 0.3	5.9	11.1	22.1	22.3	– 3.8	6.9	– 0.7	1.3	6.7	13.9
2016	328.4	1.3	52.5	12.8	16.0	1.6	6.8	13.4	25.1	26.9	24.4	8.2	1.5	2.3	8.2	15.3
2017	323.4	3.5	55.9	8.3	17.3	0.8	6.8	11.5	23.0	29.4	11.4	9.1	0.6	2.1	7.2	15.1
2018 6	339.2	– 0.6	57.1	1.3	16.8	0.3	5.5	10.5	24.7	28.5	– 3.5	8.4	– 0.3	1.4	5.8	16.6
2019	353.7	4.8	65.4	15.2	18.5	1.7	6.9	13.7	24.5	29.2	2.8	8.3	– 0.2	2.4	6.2	16.2
2020	347.6	– 6.1	70.0	– 5.4	20.1	0.1	6.9	13.3	22.1	23.0	– 22.1	6.6	– 1.4	– 1.2	6.5	12.2
2016 H2	171.6	2.9	27.4	4.2	16.0	0.2	7.4	13.3	24.3	14.1	3.0	8.2	0.0	4.0	8.9	17.1
2017 H1	148.8	4.6	24.2	0.4	16.2	– 0.6	5.2	9.8	21.0	12.1	0.3	8.2	– 0.3	1.2	5.6	14.5
H2	177.1	2.5	31.5	15.6	17.8	2.0	6.6	12.5	24.6	16.8	21.6	9.5	1.5	2.9	7.8	17.9
2018 H1 6	166.3	0.2	25.9	2.8	15.6	0.4	3.8	9.5	22.7	12.6	– 1.9	7.6	– 0.2	– 0.9	4.7	15.3
H2	174.0	– 1.3	31.3	– 0.0	18.0	0.2	6.7	11.3	25.6	15.9	– 4.6	9.1	– 0.3	2.2	7.0	17.8
2019 H1	171.4	4.0	29.0	13.1	16.9	1.4	5.7	12.3	24.4	11.6	– 7.5	6.7	– 0.9	0.0	4.9	14.5
H2	182.7	5.5	36.5	16.9	20.0	1.9	7.1	15.1	24.4	17.7	10.9	9.7	0.5	1.8	8.2	16.3
2020 H1	163.9	– 8.1	29.2	– 9.4	17.8	– 0.3	5.6	10.8	21.2	7.7	– 36.4	4.7	– 2.1	– 2.2	4.3	10.9
H2	183.8	– 4.2	40.8	– 2.2	22.2	0.4	8.9	14.7	23.3	15.3	– 12.8	8.3	– 0.9	2.6	7.5	13.3
2021 H1 p	187.9	7.7	40.3	25.7	21.4	3.1	6.9	12.6	24.5	17.7	119.8	9.4	4.8	0.9	6.9	13.6

* Non-financial groups admitted to the Prime Standard segment of the Frankfurt Stock Exchange which publish IFRS consolidated financial statements on a quarterly or half-yearly basis and make a noteworthy contribution to value added in Germany. Excluding groups engaged in real estate activities. **1** Earnings before interest, taxes, depreciation and amortisation. **2** Quantile data are based on the groups' unweighted return on sales. **3** Annual figures do not always match the sum of the two half-year figures. See Quality report on consolidated financial statement statistics, p. 3. **4** Adjusted for substantial changes in the basis of consolidation of large groups and in the reporting sample. See the explanatory notes in Statistical Series Seasonally adjusted business statistics. **5** Including groups in agriculture and forestry. **6** From this point onwards: significant changes in IFRS standards, impairing comparability with previous periods.

XII. External sector

1. Major items of the balance of payments of the euro area *

€ million

Item	2018	2019	2020	2021 Q1	2021 Q2	2021 Q3	2021 August	2021 September	2021 October p
I. Current Account	+ 340,980	+ 277,277	+ 221,591	+ 74,776	+ 68,535	+ 89,465	+ 18,016	+ 32,776	+ 20,519
1. Goods									
Receipts	2,332,341	2,393,803	2,192,093	591,485	622,109	623,627	191,641	216,602	221,479
Expenditure	2,046,711	2,083,694	1,851,113	499,991	536,905	553,251	176,044	194,749	203,658
Balance	+ 285,627	+ 310,107	+ 340,980	+ 91,493	+ 85,204	+ 70,376	+ 15,597	+ 21,853	+ 17,821
2. Services									
Receipts	949,227	1,017,589	865,196	207,785	231,610	261,819	84,796	88,916	89,072
Expenditure	832,048	983,923	858,198	191,740	207,949	226,981	79,190	72,874	73,764
Balance	+ 117,180	+ 33,665	+ 6,994	+ 16,045	+ 23,662	+ 34,838	+ 5,606	+ 16,042	+ 15,308
3. Primary income									
Receipts	856,474	859,321	756,045	184,068	201,896	183,003	58,564	64,084	54,410
Expenditure	765,793	772,943	720,532	160,033	208,203	168,846	52,820	55,977	52,897
Balance	+ 90,679	+ 86,376	+ 35,513	+ 24,034	− 6,309	+ 14,156	+ 5,743	+ 8,107	+ 1,513
4. Secondary income									
Receipts	109,968	115,363	117,362	29,059	32,077	38,283	12,794	11,367	10,053
Expenditure	262,477	268,233	279,256	85,856	66,099	68,188	21,724	24,592	24,177
Balance	− 152,505	− 152,870	− 161,894	− 56,797	− 34,022	− 29,904	− 8,930	− 13,225	− 14,123
II. Capital account	− 35,859	− 26,273	− 1,735	+ 3,153	+ 6,813	+ 17,499	+ 4,706	+ 5,654	+ 4,246
III. Financial account [1]	+ 300,611	+ 242,451	+ 242,527	+ 98,433	+ 87,762	+ 81,284	+ 11,339	+ 32,197	+ 9,837
1. Direct investment	+ 117,161	+ 89,417	− 174,919	+ 108,882	− 8,807	+ 127,195	+ 44,590	+ 21,239	+ 18,623
By resident units abroad the euro area	− 302,648	+ 15,678	− 14,851	+ 101,555	− 28,726	+ 49,001	− 10,187	+ 24,244	+ 12,943
By non-resident units of the euro area	− 419,811	− 73,740	+ 160,068	− 7,327	− 19,919	− 78,193	− 54,776	+ 3,005	− 5,680
2. Portfolio investment	+ 231,034	− 90,030	+ 539,298	+ 87,816	+ 169,129	+ 52,767	+ 23,290	+ 50,036	+ 20,208
By resident units abroad the euro area	+ 205,324	+ 424,728	+ 673,578	+ 266,325	+ 226,834	+ 117,330	+ 35,168	+ 43,465	+ 39,998
Equity and investment fund shares	+ 47,214	+ 57,582	+ 305,625	+ 166,878	+ 114,413	+ 38,440	+ 11,271	+ 7,876	+ 8,450
Short-term debt securities	− 52,659	+ 132	+ 126,361	+ 26,607	+ 13,839	− 12,925	+ 9,220	+ 3,912	+ 6,316
Long-term debt securities	+ 210,768	+ 367,018	+ 241,591	+ 72,841	+ 98,583	+ 91,816	+ 14,677	+ 31,677	+ 25,233
By non-resident units of the euro area	− 25,711	+ 514,761	+ 134,281	+ 178,508	+ 57,705	+ 64,564	+ 11,878	− 6,571	+ 19,790
Equity and investment fund shares	+ 88,614	+ 289,750	+ 117,658	+ 95,735	+ 121,053	+ 118,716	+ 58,695	+ 46	+ 34,303
Short-term debt securities	− 60,213	− 26,912	+ 138,223	+ 84,832	+ 10,853	+ 6,380	− 10,638	+ 34,233	− 17,253
Long-term debt securities	− 54,112	+ 251,923	− 121,600	− 2,056	− 74,201	− 60,533	− 36,180	− 40,850	+ 2,740
3. Financial derivatives and employee stock options	+ 39,650	+ 6,666	+ 14,002	+ 5,980	+ 1,021	+ 14,135	− 8,292	+ 718	+ 4,966
4. Other investment	− 112,487	+ 230,102	− 149,018	− 101,154	− 80,035	− 235,192	− 170,136	− 40,626	− 37,119
Eurosystem	− 134,168	+ 144,211	− 203,600	+ 144,271	− 63,595	− 166,934	− 99,927	− 48,810	− 9,620
General government	− 4,921	+ 554	− 18,857	− 24,917	− 9,142	− 37,054	− 45,266	− 4,002	+ 1,117
MFIs [2]	+ 99,940	+ 186,932	+ 17,450	− 273,474	− 6,094	− 40,408	− 33,386	− 16,916	− 25,569
Enterprises and households	− 73,338	− 101,593	+ 55,986	+ 52,968	− 1,205	+ 9,203	+ 8,444	+ 29,101	− 3,048
5. Reserve assets	+ 25,252	+ 6,297	+ 13,163	− 3,092	+ 6,454	+ 122,379	+ 121,887	+ 830	+ 3,159
IV. Net errors and omissions	− 4,509	− 8,553	+ 22,672	+ 20,505	+ 12,415	− 25,679	− 11,383	− 6,233	− 14,928

***** Source: ECB, according to the international standards of the International Monetary Fund's Balance of Payments Manual (sixth edition). **1** Increase: + / decrease: -. **2** Excluding the Eurosystem.

XII. External sector

2. Major items of the balance of payments of the Federal Republic of Germany (balances)

€ million

Zeit	Current Account							Balance of capital account [2]	Financial account [3]		Errors and omissions [4]
	Total	Goods		Services	Primary income	Secondary income			Total	of which: Reserve assets	
		Total	of which: Supplementary trade items [1]								
2006	+ 137,674	+ 160,965	− 4,687	− 31,777	+ 40,499	− 32,014	− 1,328	+ 157,142	− 2,934	+ 20,796
2007	+ 171,493	+ 201,728	− 1,183	− 32,465	+ 35,620	− 33,390	− 1,597	+ 183,169	+ 953	+ 13,273
2008	+ 144,954	+ 184,160	− 3,947	− 29,122	+ 24,063	− 34,147	− 893	+ 121,336	+ 2,008	− 22,725
2009	+ 142,744	+ 140,626	− 6,605	− 17,642	+ 54,524	− 34,764	− 1,858	+ 129,693	+ 8,648	− 11,194
2010	+ 147,298	+ 160,829	− 6,209	− 25,255	+ 51,306	− 39,582	+ 1,219	+ 92,757	+ 1,613	− 55,760
2011	+ 167,340	+ 162,970	− 9,357	− 29,930	+ 69,087	− 34,787	+ 419	+ 120,857	+ 2,836	− 46,902
2012	+ 195,712	+ 199,531	− 11,388	− 30,774	+ 65,658	− 38,703	− 413	+ 151,417	+ 1,297	− 43,882
2013	+ 184,352	+ 203,802	− 12,523	− 39,321	+ 63,284	− 43,413	− 563	+ 226,014	+ 838	+ 42,224
2014	+ 210,906	+ 219,629	− 14,296	− 25,303	+ 57,752	− 41,172	+ 2,936	+ 240,258	− 2,564	+ 26,416
2015	+ 260,286	+ 248,394	− 15,405	− 18,516	+ 69,262	− 38,854	− 48	+ 234,392	− 2,213	− 25,845
2016	+ 266,689	+ 252,409	− 19,921	− 20,987	+ 76,199	− 40,931	+ 2,142	+ 261,123	+ 1,686	− 7,708
2017	+ 254,936	+ 255,077	− 13,613	− 23,994	+ 74,629	− 50,776	− 2,936	+ 276,709	− 1,269	+ 24,710
2018	+ 264,156	+ 224,584	− 22,682	− 17,410	+ 105,694	− 48,713	+ 676	+ 246,544	+ 392	− 18,288
2019	+ 258,627	+ 216,523	− 31,760	− 20,653	+ 111,191	− 48,434	− 526	+ 203,799	− 544	− 54,302
2020	+ 234,408	+ 190,022	− 8,907	+ 3,471	+ 92,497	− 51,582	− 4,771	+ 231,103	− 51	+ 1,466
2018 Q4	+ 65,027	+ 44,532	− 12,500	− 871	+ 38,033	− 16,667	− 609	+ 61,806	+ 560	− 2,612
2019 Q1	+ 70,210	+ 56,391	− 4,760	− 1,290	+ 31,863	− 16,753	+ 900	+ 44,999	− 63	− 26,111
Q2	+ 57,800	+ 52,295	− 7,867	− 2,849	+ 14,629	− 6,274	− 374	+ 47,570	+ 444	− 9,856
Q3	+ 62,831	+ 57,801	− 7,757	− 12,518	+ 29,954	− 12,405	+ 265	+ 18,301	− 349	− 44,796
Q4	+ 67,786	+ 50,037	− 11,376	− 3,995	+ 34,746	− 13,003	− 1,317	+ 92,930	− 576	+ 26,460
2020 Q1	+ 61,990	+ 52,294	− 2,696	− 2,773	+ 26,874	− 14,404	− 348	+ 37,818	+ 133	− 23,824
Q2	+ 37,780	+ 27,995	− 1,960	+ 5,647	+ 13,060	− 8,922	+ 188	+ 28,568	+ 243	− 9,400
Q3	+ 62,371	+ 56,000	− 1,106	− 5,402	+ 22,142	− 10,369	− 1,206	+ 68,302	− 1,276	+ 7,136
Q4	+ 72,266	+ 53,732	− 3,145	+ 5,999	+ 30,421	− 17,886	− 3,405	+ 96,416	+ 848	+ 27,555
2021 Q1 r	+ 68,317	+ 56,185	− 1,223	+ 5,056	+ 27,693	− 20,618	− 215	+ 123,063	+ 385	+ 54,961
Q2 r	+ 60,053	+ 45,470	− 2,141	+ 8,553	+ 14,602	− 8,572	− 1,887	+ 77,713	+ 58	+ 19,547
Q3 r	+ 58,815	+ 45,977	− 3,485	− 3,256	+ 29,227	− 13,133	+ 1,968	+ 8,706	+ 31,199	− 52,076
2019 June	+ 20,112	+ 16,077	− 2,092	− 2,668	+ 10,048	− 3,344	− 276	+ 17,589	− 285	− 2,247
July	+ 20,611	+ 20,555	− 3,036	− 4,819	+ 9,538	− 4,664	+ 171	+ 11,234	+ 348	− 9,548
Aug.	+ 17,334	+ 16,559	− 1,639	− 5,218	+ 10,219	− 4,226	+ 788	− 1,942	+ 755	− 20,065
Sep.	+ 24,886	+ 20,687	− 3,083	− 2,482	+ 10,197	− 3,516	− 694	+ 9,009	− 1,452	− 15,183
Oct.	+ 19,690	+ 20,550	− 3,285	− 5,948	+ 9,775	− 4,687	− 823	+ 44,140	− 107	+ 25,273
Nov.	+ 23,695	+ 17,228	− 3,055	+ 392	+ 9,744	− 3,669	− 491	+ 20,116	− 356	− 3,088
Dec.	+ 24,401	+ 12,259	− 5,035	+ 1,562	+ 15,227	− 4,647	− 3	+ 28,674	− 113	+ 4,275
2020 Jan.	+ 15,759	+ 14,015	− 769	− 1,090	+ 10,156	− 7,321	+ 267	+ 3,235	+ 898	− 12,791
Feb.	+ 21,548	+ 20,188	− 1,768	− 1,359	+ 7,014	− 4,294	+ 48	+ 17,898	+ 750	− 3,698
Mar.	+ 24,683	+ 18,092	− 159	− 324	+ 9,704	− 2,789	− 663	+ 16,684	− 1,514	− 7,336
Apr.	+ 10,184	+ 3,930	− 617	+ 1,710	+ 8,859	− 4,315	+ 88	+ 10,215	+ 950	− 58
May	+ 7,411	+ 9,326	+ 768	+ 1,553	− 14	− 3,454	+ 8	+ 115	+ 33	− 7,304
June	+ 20,185	+ 14,739	− 2,111	+ 2,384	+ 4,215	− 1,154	+ 91	+ 18,238	− 740	− 2,039
July	+ 20,644	+ 20,206	− 430	− 2,646	+ 6,782	− 3,698	− 928	+ 18,341	− 611	− 1,375
Aug.	+ 16,758	+ 14,005	− 226	− 2,308	+ 8,416	− 3,355	+ 486	+ 32,997	− 611	+ 15,753
Sep.	+ 24,969	+ 21,788	− 450	− 448	+ 6,944	− 3,315	− 764	+ 16,964	− 53	− 7,241
Oct.	+ 24,361	+ 20,723	− 513	+ 843	+ 7,236	− 4,442	− 1,320	+ 27,100	+ 140	+ 4,060
Nov.	+ 21,660	+ 18,474	+ 122	+ 2,239	+ 8,537	− 7,589	− 2,090	+ 14,685	+ 89	− 4,885
Dec.	+ 26,245	+ 14,535	− 2,754	+ 2,917	+ 14,648	− 5,855	+ 5	+ 54,631	+ 618	+ 28,380
2021 Jan. r	+ 18,148	+ 14,532	− 440	+ 1,160	+ 9,795	− 7,340	− 395	+ 27,039	+ 743	+ 9,286
Feb. r	+ 18,724	+ 18,088	− 728	+ 1,733	+ 7,636	− 8,733	− 1,448	+ 52,214	+ 102	+ 34,938
Mar. r	+ 31,445	+ 23,565	− 56	+ 2,162	+ 10,262	− 4,545	+ 1,628	+ 43,810	− 460	+ 10,737
Apr. r	+ 22,129	+ 15,539	− 662	+ 3,904	+ 6,508	− 3,822	− 984	+ 27,431	− 251	+ 6,286
May r	+ 14,016	+ 13,796	− 778	+ 2,699	− 642	− 1,837	− 271	+ 17,729	+ 211	+ 3,984
June r	+ 23,908	+ 16,135	− 701	+ 1,950	+ 8,735	− 2,913	− 632	+ 32,553	+ 98	+ 9,277
July r	+ 19,513	+ 17,446	− 1,487	− 473	+ 8,292	− 5,752	− 574	+ 632	+ 102	− 18,308
Aug. r	+ 17,147	+ 12,019	− 426	− 2,641	+ 10,287	− 2,518	+ 586	+ 10,824	+ 31,254	− 6,909
Sep. r	+ 22,155	+ 16,511	− 1,572	− 141	+ 10,648	− 4,863	+ 1,955	− 2,749	− 158	− 26,859
Oct.	+ 17,621	+ 13,885	− 440	− 539	+ 9,916	− 5,641	+ 507	+ 5,190	+ 261	− 12,938
Nov. p	+ 18,895	+ 13,577	− 906	+ 1,643	+ 9,818	− 6,143	− 958	+ 50,440	+ 963	+ 32,503

1 For example, warehouse transactions for the account of residents, deductions of goods returned and deductions of exports and imports in connection with goods for processing. **2** Including net acquisition/disposal of non-produced non-financial assets. **3** Net lending: + / net borrowing: -. **4** Statistical errors and omissions resulting from the difference between the balance on the financial account and the balances on the current account and the capital account.

XII. External sector

3. Foreign trade (special trade) of the Federal Republic of Germany, by country and group of countries *

€ million

Group of countries/country		2018	2019	2020	2021 June	2021 July	2021 Aug.	2021 Sep.	2021 Oct.	2021 Nov. p
All countries 1	Exports	1,317,440	1,328,152	1,206,928	118,682	115,134	104,524	117,864	121,389	125,683
	Imports	1,088,720	1,104,141	1,026,502	102,743	97,290	92,952	101,881	108,673	113,654
	Balance	+ 228,720	+ 224,010	+ 180,427	+ 15,939	+ 17,845	+ 11,572	+ 15,983	+ 12,716	+ 12,029
I. European countries	Exports	900,141	902,831	824,921	81,419	78,617	71,402	81,723	84,075	87,056
	Imports	744,575	747,692	682,477	68,634	65,772	59,904	67,356	72,950	76,696
	Balance	+ 155,566	+ 155,140	+ 142,444	+ 12,785	+ 12,845	+ 11,498	+ 14,367	+ 11,125	+ 10,360
1. EU Member States (27)	Exports	696,480	698,257	635,741	64,690	61,654	55,739	64,612	66,780	67,941
	Imports	586,433	593,251	546,655	55,179	52,724	47,008	53,703	57,781	60,421
	Balance	+ 110,047	+ 105,006	+ 89,087	+ 9,511	+ 8,931	+ 8,732	+ 10,909	+ 9,000	+ 7,521
Euro area (19) countries	Exports	492,469	492,308	441,853	45,110	43,254	37,764	44,936	46,472	47,157
	Imports	405,810	409,863	371,211	38,180	36,658	32,412	36,631	40,111	41,557
	Balance	+ 86,659	+ 82,445	+ 70,643	+ 6,931	+ 6,596	+ 5,352	+ 8,306	+ 6,361	+ 5,600
of which:										
Austria	Exports	65,027	66,076	60,118	6,124	6,058	5,546	6,366	6,447	6,794
	Imports	42,994	44,059	40,454	4,133	4,150	3,428	4,262	4,190	4,312
	Balance	+ 22,033	+ 22,017	+ 19,663	+ 1,991	+ 1,908	+ 2,118	+ 2,104	+ 2,258	+ 2,482
Belgium and Luxembourg	Exports	50,389	52,006	48,824	4,938	4,511	4,334	4,961	5,210	5,070
	Imports	49,315	46,322	39,584	5,354	4,797	4,500	4,649	4,911	5,252
	Balance	+ 1,074	+ 5,683	+ 9,240	− 416	− 286	− 166	+ 312	+ 299	− 182
France	Exports	105,359	106,564	90,910	9,150	8,439	7,141	8,727	8,838	9,411
	Imports	65,024	66,199	56,364	5,450	5,223	4,440	5,295	5,733	5,809
	Balance	+ 40,335	+ 40,364	+ 34,546	+ 3,700	+ 3,216	+ 2,701	+ 3,432	+ 3,105	+ 3,602
Italy	Exports	69,813	67,887	60,634	6,559	6,685	4,725	6,550	7,608	6,648
	Imports	60,223	57,100	53,906	5,618	5,733	4,550	5,472	5,807	6,039
	Balance	+ 9,591	+ 10,786	+ 6,728	+ 940	+ 952	+ 175	+ 1,077	+ 1,801	+ 609
Netherlands	Exports	91,061	91,528	84,579	8,442	8,174	7,921	8,874	8,827	8,952
	Imports	97,709	97,816	87,024	8,491	8,619	8,194	9,017	10,344	10,447
	Balance	− 6,649	− 6,288	− 2,445	− 49	− 445	− 273	− 143	− 1,517	− 1,495
Spain	Exports	44,184	44,218	37,618	3,882	3,646	3,046	3,652	3,641	4,027
	Imports	32,399	33,126	31,281	3,061	2,730	2,173	2,543	2,781	3,360
	Balance	+ 11,785	+ 11,092	+ 6,337	+ 821	+ 916	+ 873	+ 1,110	+ 859	+ 667
Other EU Member States	Exports	204,011	205,949	193,888	19,580	18,400	17,975	19,676	20,309	20,784
	Imports	180,623	183,387	175,444	16,999	16,065	14,596	17,072	17,670	18,863
	Balance	+ 23,388	+ 22,561	+ 18,444	+ 2,581	+ 2,334	+ 3,380	+ 2,603	+ 2,639	+ 1,921
2. Other European countries	Exports	203,661	204,575	189,180	16,729	16,963	15,663	17,111	17,294	19,115
	Imports	158,142	154,441	135,822	13,455	13,048	12,896	13,653	15,169	16,276
	Balance	+ 45,519	+ 50,134	+ 53,358	+ 3,273	+ 3,915	+ 2,767	+ 3,458	+ 2,126	+ 2,839
of which:										
Switzerland	Exports	54,021	56,345	56,265	4,995	4,835	4,927	5,009	5,337	6,152
	Imports	45,913	45,824	45,556	4,159	3,886	3,768	4,072	4,212	4,570
	Balance	+ 8,108	+ 10,521	+ 10,708	+ 836	+ 949	+ 1,158	+ 937	+ 1,125	+ 1,581
United Kingdom	Exports	82,164	79,166	67,086	5,546	5,936	4,793	5,741	5,721	6,149
	Imports	37,025	38,397	35,018	2,716	2,852	2,293	2,291	2,842	2,903
	Balance	+ 45,139	+ 40,770	+ 32,068	+ 2,830	+ 3,084	+ 2,500	+ 3,450	+ 2,879	+ 3,246
II. Non-European countries	Exports	413,483	421,728	380,292	37,091	36,312	32,900	35,940	37,075	38,396
	Imports	342,980	355,390	343,270	34,015	31,420	32,809	34,390	35,578	36,806
	Balance	+ 70,503	+ 66,338	+ 37,022	+ 3,076	+ 4,892	+ 91	+ 1,550	+ 1,497	+ 1,590
1. Africa	Exports	22,524	23,627	20,086	1,911	2,297	1,863	2,058	1,657	1,835
	Imports	22,542	24,475	18,758	2,433	2,086	1,981	2,256	2,633	2,273
	Balance	− 18	− 848	+ 1,328	− 523	+ 211	− 118	− 198	− 977	− 438
2. America	Exports	158,952	165,602	141,375	14,607	14,799	13,046	14,452	14,810	15,189
	Imports	92,444	100,007	94,005	9,614	7,810	8,689	8,765	8,364	8,713
	Balance	+ 66,508	+ 65,595	+ 47,370	+ 4,993	+ 6,989	+ 4,358	+ 5,687	+ 6,446	+ 6,475
of which:										
United States	Exports	113,341	118,680	103,476	10,260	10,837	9,406	10,752	10,968	10,979
	Imports	64,493	71,334	67,694	6,819	5,491	6,207	6,266	6,002	6,290
	Balance	+ 48,847	+ 47,346	+ 35,782	+ 3,441	+ 5,346	+ 3,200	+ 4,486	+ 4,965	+ 4,689
3. Asia	Exports	219,716	221,278	208,146	19,569	18,141	17,160	18,470	19,625	20,147
	Imports	224,355	227,036	226,646	21,523	21,163	21,845	23,074	24,259	25,534
	Balance	− 4,639	− 5,759	− 18,500	− 1,954	− 3,022	− 4,686	− 4,604	− 4,633	− 5,386
of which:										
Middle East	Exports	29,144	28,663	25,882	2,326	2,013	2,112	2,160	2,173	2,267
	Imports	8,156	7,460	6,721	640	681	623	658	745	789
	Balance	+ 20,989	+ 21,202	+ 19,161	+ 1,686	+ 1,331	+ 1,488	+ 1,501	+ 1,428	+ 1,478
Japan	Exports	20,436	20,662	17,396	1,402	1,435	1,557	1,640	1,573	1,688
	Imports	23,710	23,904	21,427	2,036	1,945	1,924	2,114	2,039	2,153
	Balance	− 3,275	− 3,243	− 4,032	− 634	− 510	− 367	− 474	− 467	− 465
People's Republic of China 2	Exports	93,004	95,984	95,840	9,516	8,344	7,631	8,458	9,381	8,949
	Imports	106,065	110,054	117,373	11,031	10,847	11,396	12,301	13,335	14,135
	Balance	− 13,061	− 14,070	− 21,533	− 1,515	− 2,503	− 3,765	− 3,842	− 3,954	− 5,186
New industrial countries and emerging markets of Asia 3	Exports	54,995	54,164	50,590	4,489	4,672	4,074	4,383	4,755	5,157
	Imports	52,945	51,748	48,222	4,800	4,357	4,732	4,750	4,727	5,090
	Balance	+ 2,050	+ 2,416	+ 2,368	− 311	+ 315	− 658	− 367	+ 28	+ 67
4. Oceania and polar regions	Exports	12,291	11,221	10,685	1,005	1,076	831	961	983	1,225
	Imports	3,639	3,872	3,861	445	361	295	295	322	286
	Balance	+ 8,652	+ 7,349	+ 6,824	+ 560	+ 715	+ 536	+ 665	+ 661	+ 940

***** Source: Federal Statistical Office. Exports (f.o.b.) by country of destination, Imports (c.i.f.) by country of origin. Individual countries and groups of countries according to the current position. EU excl. UK. **1** Including fuel and other supplies for ships and aircraft and other data not classifiable by region. **2** Excluding Hong Kong. **3** Brunei Darussalam, Hong Kong, Indonesia, Malaysia, Philippines, Republic of Korea, Singapore, Taiwan and Thailand.

XII. External sector

4. Services and primary income of the Federal Republic of Germany (balances)

€ million

Zeit	Services									Primary income		
	Total	of which: Transport	Travel [1]	Financial services	Charges for the use of intellectual property	Telecommunications-, computer and information services	Other business services	Gouvernment goods and services [2]		Compensation of employees	Investment income	Other primary income [3]
2016	− 20,987	− 5,950	− 38,247	+ 8,612	+ 15,790	− 7,156	− 1,520	+ 3,092		+ 474	+ 76,800	− 1,076
2017	− 23,994	− 3,679	− 43,558	+ 9,613	+ 14,903	− 8,188	− 1,065	+ 2,177		− 637	+ 76,669	− 1,403
2018	− 17,410	− 2,003	− 44,543	+ 9,535	+ 17,398	− 7,206	+ 580	+ 3,325		− 1,208	+ 107,902	− 1,001
2019	− 20,653	+ 2	− 45,947	+ 10,392	+ 17,728	− 9,561	− 2,933	+ 3,493		+ 373	+ 111,763	− 945
2020	+ 3,471	− 6,095	− 14,698	+ 9,461	+ 17,392	− 6,822	− 4,775	+ 3,347		+ 2,307	+ 91,586	− 1,396
2020 Q1	− 2,773	− 1,220	− 7,497	+ 2,464	+ 4,344	− 2,164	− 963	+ 881		+ 917	+ 26,953	− 996
Q2	+ 5,647	− 1,534	+ 259	+ 2,332	+ 4,794	− 1,524	− 1,125	+ 879		+ 384	+ 15,200	− 2,524
Q3	− 5,402	− 1,863	− 7,428	+ 2,206	+ 3,353	− 1,993	− 1,645	+ 892		+ 97	+ 23,168	− 1,123
Q4	+ 5,999	− 1,478	− 32	+ 2,458	+ 4,902	− 1,140	− 1,042	+ 695		+ 909	+ 26,265	+ 3,247
2021 Q1 r	+ 5,056	− 1,036	− 378	+ 2,614	+ 5,875	− 2,501	− 1,418	+ 785		+ 999	+ 27,710	− 1,016
Q2 r	+ 8,553	− 223	− 1,723	+ 2,522	+ 8,438	− 1,254	− 1,241	+ 824		+ 464	+ 17,003	− 2,865
Q3 r	− 3,256	+ 577	− 12,797	+ 863	+ 9,267	− 2,007	− 1,027	+ 855		+ 112	+ 30,348	− 1,234
2021 Jan. r	+ 1,160	− 460	− 133	+ 1,013	+ 1,303	− 869	− 347	+ 256		+ 343	+ 9,806	− 354
Feb. r	+ 1,733	− 356	− 62	+ 797	+ 1,865	− 733	− 260	+ 262		+ 359	+ 7,576	− 299
Mar. r	+ 2,162	− 220	− 183	+ 803	+ 2,706	− 900	− 811	+ 267		+ 297	+ 10,328	− 363
Apr. r	+ 3,904	+ 192	− 155	+ 1,204	+ 2,954	− 673	− 153	+ 265		+ 138	+ 6,694	− 323
May r	+ 2,699	− 190	− 144	+ 847	+ 2,389	− 477	− 495	+ 289		+ 171	+ 1,278	− 2,091
June r	+ 1,950	− 224	− 1,425	+ 472	+ 3,095	− 104	− 592	+ 271		+ 155	+ 9,031	− 451
July r	− 473	− 87	− 3,328	+ 761	+ 2,834	− 1,178	+ 24	+ 293		+ 26	+ 8,675	− 410
Aug. r	− 2,641	+ 465	− 5,126	− 557	+ 2,842	− 350	− 526	+ 305		+ 43	+ 10,652	− 408
Sep. r	− 141	+ 198	− 4,344	+ 660	+ 3,591	− 480	− 526	+ 257		+ 43	+ 11,021	− 416
Oct.	− 539	+ 94	− 3,532	+ 1,102	+ 3,387	− 590	− 1,561	+ 287		+ 256	+ 10,133	− 473
Nov. p	+ 1,643	+ 456	− 1,324	+ 602	+ 3,421	− 782	− 1,409	+ 183		+ 263	+ 9,972	− 417

1 Since 2001 the sample results of a household survey have been used on the expenditure side. **2** Domestic public authorities' receipts from and expenditure on services, not included elsewhere; including the receipts from foreign military bases. **3** Includes, inter alia, taxes on leasing, production and imports transferred to the EU as well as subsidies received from the EU.

5. Secondary income and Capital account of the Federal Republic of Germany (balances)

€ million

Zeit	Secondary income							Capital account		
		General government			All sectors excluding general government [2]					
			of which:			of which:				
	Total	Total	Current international cooperation [1]	Current taxes on income, wealth, etc.	Total	Personal transfers between resident and non-resident households [3]	of which: Workers' remittances	Total	Non-produced non-financial assets	Capital transfers
2016	− 40,931	− 25,417	− 11,516	+ 10,739	− 15,514	+ 4,214	+ 4,196	+ 2,142	+ 3,219	− 1,077
2017	− 50,776	− 23,191	− 9,851	+ 9,665	− 27,584	+ 4,632	+ 4,613	− 2,936	+ 926	− 3,863
2018	− 48,713	− 28,645	− 10,186	+ 10,237	− 20,067	+ 5,152	+ 5,142	+ 676	+ 3,444	− 2,768
2019	− 48,434	− 28,956	− 10,728	+ 11,745	− 19,479	+ 5,445	+ 5,431	− 526	+ 2,754	− 3,280
2020	− 51,582	− 34,268	− 12,211	+ 10,877	− 17,313	+ 5,925	+ 5,908	− 4,771	+ 469	− 5,240
2020 Q1	− 14,404	− 9,565	− 2,315	+ 2,514	− 4,839	+ 1,482	+ 1,477	− 348	− 444	+ 95
Q2	− 8,922	− 4,819	− 2,270	+ 4,506	− 4,104	+ 1,480	+ 1,477	+ 188	+ 504	− 316
Q3	− 10,369	− 6,422	− 3,249	+ 2,144	− 3,947	+ 1,481	+ 1,477	− 1,206	− 54	− 1,151
Q4	− 17,886	− 13,463	− 4,378	+ 1,713	− 4,423	+ 1,482	+ 1,477	− 3,405	+ 464	− 3,869
2021 Q1	− 20,618	− 14,676	− 3,294	+ 2,276	− 5,942	.	+ 1,543	− 215	− 25	− 190
Q2	− 8,572	− 4,303	− 1,584	+ 5,280	− 4,269	.	+ 1,543	− 1,887	− 1,702	− 184
Q3	− 13,133	− 8,057	− 1,848	+ 2,115	− 5,076	.	+ 1,543	+ 1,968	+ 2,870	− 902
2021 Jan.	− 7,340	− 5,854	− 1,803	+ 399	− 1,486	.	+ 514	− 395	− 373	− 22
Feb.	− 8,733	− 6,458	− 661	+ 923	− 2,275	+ 515	+ 514	− 1,448	− 1,236	− 212
Mar.	− 4,545	− 2,364	− 830	+ 955	− 2,181	+ 516	+ 514	+ 1,628	+ 1,584	+ 44
Apr.	− 3,822	− 2,165	− 641	+ 1,332	− 1,658	.	+ 514	− 984	− 857	− 127
May	− 1,837	− 734	− 409	+ 2,799	− 1,103	+ 516	+ 514	− 271	− 250	− 21
June	− 2,913	− 1,405	− 535	+ 1,149	− 1,508	+ 515	+ 514	− 632	− 596	− 36
July	− 5,752	− 3,968	− 2,738	+ 686	− 1,784	.	+ 514	− 574	− 242	− 332
Aug.	− 2,518	− 1,072	+ 1,552	+ 379	− 1,446	+ 515	+ 514	+ 586	+ 679	− 93
Sep.	− 4,863	− 3,017	− 662	+ 1,050	− 1,846	.	+ 514	+ 1,955	+ 2,433	− 477
Oct.	− 5,641	− 3,932	− 726	+ 452	− 1,709	+ 516	+ 514	+ 507	+ 787	− 280
Nov. p	− 6,143	− 4,363	− 1,346	+ 327	− 1,780	+ 515	+ 514	− 958	− 405	− 553

1 Excluding capital transfers, where identifiable. Includes current international cooperation and other current transfers. **2** Includes insurance premiums and claims (excluding life insurance policies). **3** Transfers between resident and non-resident households.

XII. External sector

6. Financial account of the Federal Republic of Germany (net)

€ million

Item	2018	2019	2020	2021					
				Q1	Q2	Q3	September	October	November p)
I. Net domestic investment abroad (increase: +)	+ 398 714	+ 247 406	+ 707 119	+ 287 271	+ 132 028	+ 116 122	+ 110 800	+ 75 923	+ 154 713
1. Direct investment	+ 156 050	+ 136 291	+ 96 602	+ 45 517	+ 17 302	+ 36 955	+ 26 564	+ 7 061	+ 39 890
Equity	+ 154 766	+ 116 375	+ 79 229	+ 12 105	+ 31 115	+ 25 246	+ 8 796	+ 6 661	+ 7 975
of which:									
Reinvestment of earnings 1)	+ 37 276	+ 37 654	+ 16 648	+ 14 233	+ 7 491	+ 12 714	+ 4 193	+ 4 992	+ 3 615
Debt instruments	+ 1 285	+ 19 916	+ 17 373	+ 33 412	− 13 813	+ 11 709	+ 17 768	+ 400	+ 31 915
2. Portfolio investment	+ 82 648	+ 136 850	+ 186 532	+ 77 652	+ 59 175	+ 50 981	+ 26 323	+ 13 430	+ 27 359
Shares 2)	+ 9 251	+ 14 111	+ 65 947	+ 9 077	+ 10 119	+ 19 425	+ 8 019	+ 6 326	+ 3 398
Investment fund shares 3)	+ 28 366	+ 53 919	+ 64 435	+ 16 793	+ 24 841	+ 22 315	+ 8 516	+ 10 492	+ 15 798
Short-term 4)									
debt securities	+ 1 973	+ 8 599	+ 2 019	+ 3 628	− 5 848	+ 6 740	+ 3 982	+ 1 284	− 2 894
Long-term 5)									
debt securities	+ 43 058	+ 60 221	+ 54 131	+ 48 154	+ 30 063	+ 2 501	+ 5 806	− 4 672	+ 11 058
3. Financial derivatives and employee stock options 6)	+ 22 539	+ 24 532	+ 99 097	+ 22 346	+ 13 451	− 10 713	− 6 235	+ 1 830	+ 11 409
4. Other investment 7)	+ 137 085	− 49 723	+ 324 940	+ 141 371	+ 42 041	+ 7 700	+ 64 306	+ 53 341	+ 75 091
MFIs 8)	+ 49 862	+ 9 276	− 4 494	+ 142 555	+ 17 351	− 31 973	− 14 698	+ 65 215	− 2 264
Short-term	+ 45 400	− 8 901	+ 3 526	+ 135 399	+ 13 907	− 23 041	− 15 474	+ 45 617	+ 610
Long-term	+ 4 462	+ 18 177	− 8 020	+ 7 157	+ 3 444	− 8 932	+ 776	+ 19 598	− 2 874
Enterprises and households 9)	+ 39 124	+ 16 241	+ 85 204	+ 57 978	+ 8 452	+ 25 272	+ 4 343	+ 29 905	+ 16 753
Short-term	+ 20 489	+ 4 510	+ 43 928	+ 55 568	+ 5 122	+ 19 167	+ 1 872	+ 33 439	+ 18 385
Long-term	+ 18 635	+ 11 730	+ 41 276	+ 2 410	+ 3 330	+ 6 105	+ 2 471	− 3 534	− 1 632
General government	− 8 696	− 4 325	+ 1 118	− 4 891	− 723	− 710	− 2 244	+ 5 638	+ 1 025
Short-term	− 7 706	− 1 139	+ 2 399	− 4 591	− 695	− 442	− 2 202	+ 5 855	+ 1 164
Long-term	− 990	− 3 186	− 1 281	− 300	− 28	− 268	− 42	− 217	− 139
Bundesbank	+ 56 795	− 70 915	+ 243 112	− 54 271	+ 16 961	+ 15 111	+ 76 906	− 47 417	+ 59 577
5. Reserve assets	+ 392	− 544	− 51	+ 385	+ 58	+ 31 199	− 158	+ 261	+ 963
II. Net foreign investment in the reporting country (increase: +)	+ 152 171	+ 43 607	+ 476 016	+ 164 208	+ 54 315	+ 107 415	+ 113 548	+ 70 733	+ 104 273
1. Direct investment	+ 135 583	+ 60 170	+ 97 216	+ 14 345	+ 13 647	+ 19 006	+ 21 992	+ 12 716	+ 14 214
Equity	+ 48 790	+ 30 250	+ 31 079	+ 5 664	+ 8 759	+ 4 454	+ 514	+ 6 784	+ 1 563
of which:									
Reinvestment of earnings 1)	+ 4 331	+ 1 031	+ 2 152	+ 1 039	− 1 921	+ 2 176	+ 373	+ 526	+ 920
Debt instruments	+ 86 793	+ 29 920	+ 66 136	+ 8 681	+ 4 888	+ 14 552	+ 21 478	+ 5 931	+ 12 651
2. Portfolio investment	− 70 988	+ 63 443	+ 143 783	+ 30 853	− 10 289	− 10 247	− 8 592	− 14 530	− 4 577
Shares 2)	− 30 383	− 6 075	− 16 838	+ 4 188	− 5 174	+ 411	− 1 578	− 5 027	− 9 238
Investment fund shares 3)	− 6 364	− 4 923	+ 933	+ 110	+ 999	− 1 097	+ 154	− 540	− 955
Short-term 4)									
debt securities	+ 5 128	+ 15 902	+ 80 193	+ 19 476	+ 216	+ 8 917	+ 1 746	− 8 864	+ 12 459
Long-term 5)									
debt securities	− 39 370	+ 58 539	+ 79 494	+ 7 079	− 6 330	− 18 478	− 8 914	− 99	− 6 844
3. Other investment 7)	+ 87 576	− 80 006	+ 235 017	+ 119 010	+ 50 957	+ 98 656	+ 100 148	+ 72 547	+ 94 636
MFIs 8)	− 35 902	− 10 214	+ 108 397	+ 248 352	+ 28 522	− 2 854	+ 37 812	+ 42 209	+ 25 046
Short-term	− 27 469	− 20 978	+ 74 805	+ 218 851	+ 43 378	− 19 087	+ 42 119	+ 34 387	+ 17 835
Long-term	− 8 433	+ 10 764	+ 33 591	+ 29 501	− 14 856	+ 16 233	− 4 307	+ 7 823	+ 7 211
Enterprises and households 9)	+ 18 949	+ 29 501	+ 26 267	+ 8 474	− 4 287	+ 26 526	+ 14 968	+ 39 605	+ 27 223
Short-term	+ 7 132	+ 9 988	+ 18 062	+ 11 480	− 781	+ 26 151	+ 16 406	+ 34 284	+ 25 081
Long-term	+ 11 816	+ 19 513	+ 8 206	− 3 006	− 3 505	+ 375	− 1 438	+ 5 321	+ 2 142
General government	+ 2 906	+ 262	− 10 521	− 3 760	+ 3 635	− 133	+ 1 556	+ 1 153	+ 5 363
Short-term	+ 2 230	+ 124	− 10 306	− 1 044	+ 3 624	− 156	+ 1 511	+ 1 130	+ 5 342
Long-term	+ 677	+ 138	− 216	− 2 716	+ 10	+ 22	+ 46	+ 23	+ 20
Bundesbank	+ 101 623	− 99 554	+ 110 874	− 134 057	+ 23 087	+ 75 117	+ 45 812	− 10 420	+ 37 005
III. Net financial account (net lending: +/net borrowing: -)	+ 246 544	+ 203 799	+ 231 103	+ 123 063	+ 77 713	+ 8 706	− 2 749	+ 5 190	+ 50 440

1 Estimated on the basis of the figures on the level of direct investment stocks abroad and in the Federal Republic of Germany (see Statistical series, direct investment statistics). **2** Including participation certificates. **3** Including reinvestment of earnings. **4** Short-term: original maturity up to one year. **5** Up to and including 2012 without accrued interest. Long-term: original maturity of more than one year or unlimited. **6** Balance of transactions arising from options and financial futures contracts as well as employee stock options. **7** Includes in particular loans, trade credits as well as currency and deposits. **8** Excluding Bundesbank. **9** Includes the following sectors: financial corporations (excluding monetary financial institutions) as well as non-financial corporations, households and non-profit institutions serving households.

XII. External sector

7. External position of the Bundesbank *

€ million

End of reporting period	External assets									External liabilities 3ä, 4	Net external position 5
		Reserve assets					Other investment				
	Total	Total	Gold and gold receivables	Special drawing rights	Reserve position in the IMF	Currency, deposits and securities	Total	of which: Clearing accounts within the ESCB 1	Portfolio investment 2		
1999 Jan. 6	95,316	93,940	29,312	1,598	6,863	56,167	1,376	–	–	9,628	85,688
2002	103,948	85,002	36,208	1,888	6,384	40,522	18,780	4,995	166	66,278	37,670
2003	95,394	76,680	36,533	1,540	6,069	32,538	18,259	4,474	454	83,329	12,065
2004	93,110	71,335	35,495	1,512	5,036	29,292	21,110	7,851	665	95,014	– 1,904
2005	130,268	86,181	47,924	1,601	2,948	33,708	43,184	29,886	902	115,377	14,891
2006	104,389	84,765	53,114	1,525	1,486	28,640	18,696	5,399	928	134,697	– 30,308
2007	179,492	92,545	62,433	1,469	949	27,694	84,420	71,046	2,527	176,569	2,923
2008	230,775	99,185	68,194	1,576	1,709	27,705	129,020	115,650	2,570	237,893	– 7,118
2009	323,286	125,541	83,939	13,263	2,705	25,634	190,288	177,935	7,458	247,645	75,641
2010	524,695	162,100	115,403	14,104	4,636	27,957	337,921	325,553	24,674	273,241	251,454
2011	714,662	184,603	132,874	14,118	8,178	29,433	475,994	463,311	54,065	333,730	380,932
2012	921,002	188,630	137,513	13,583	8,760	28,774	668,672	655,670	63,700	424,999	496,003
2013	721,741	143,753	94,876	12,837	7,961	28,080	523,153	510,201	54,834	401,524	320,217
2014	678,804	158,745	107,475	14,261	6,364	30,646	473,274	460,846	46,784	396,314	282,490
2015	800,709	159,532	105,792	15,185	5,132	33,423	596,638	584,210	44,539	481,787	318,921
2016	990,450	175,765	119,253	14,938	6,581	34,993	767,128	754,263	47,557	592,723	397,727
2017	1,142,845	166,842	117,347	13,987	4,294	31,215	923,765	906,941	52,238	668,527	474,318
2018	1,209,982	173,138	121,445	14,378	5,518	31,796	980,560	966,190	56,284	770,519	439,462
2019	1,160,971	199,295	146,562	14,642	6,051	32,039	909,645	895,219	52,031	671,202	489,769
2020	1,429,236	219,127	166,904	14,014	8,143	30,066	1,152,757	1,136,002	57,353	781,339	647,898
2021	1,592,822	261,387	173,821	46,491	8,426	32,649	1,276,150	1,260,673	55,285	1,009,488	583,334
2019 July	1,134,349	193,244	139,163	14,613	6,391	33,077	888,584	870,903	52,521	621,971	512,378
Aug.	1,173,640	205,331	149,696	14,703	6,379	34,553	915,546	897,901	52,763	638,733	534,907
Sep.	1,185,142	202,285	147,611	14,831	6,396	33,447	930,892	915,342	51,965	626,236	558,906
Oct.	1,103,094	199,858	146,284	14,663	6,287	32,624	852,754	837,377	50,482	596,696	506,398
Nov.	1,134,129	197,047	143,253	14,799	6,116	32,879	885,524	870,520	51,558	590,333	543,797
Dec.	1,160,971	199,295	146,562	14,642	6,051	32,039	909,645	895,219	52,031	671,202	489,769
2020 Jan.	1,090,725	209,432	154,867	14,785	6,110	33,671	828,120	811,435	53,173	580,910	509,814
Feb.	1,106,033	215,748	159,889	14,857	5,989	35,014	836,782	821,562	53,503	577,033	529,000
Mar.	1,218,815	213,722	158,677	14,812	5,965	34,268	952,781	935,126	52,312	617,919	600,896
Apr.	1,214,851	226,903	170,359	14,935	6,857	34,753	934,333	918,814	53,615	616,319	598,532
May	1,209,328	223,125	167,780	14,650	6,787	33,908	931,521	916,145	54,682	612,403	596,925
June	1,294,167	226,135	170,728	14,603	6,955	33,849	1,012,982	995,083	55,050	618,825	675,342
July	1,323,691	233,547	180,400	14,179	7,465	31,503	1,034,282	1,019,214	55,862	599,189	724,503
Aug.	1,358,137	230,309	177,973	14,129	7,423	30,784	1,071,521	1,056,231	56,307	600,390	757,747
Sep.	1,414,933	227,150	173,979	14,293	7,632	31,246	1,131,686	1,115,189	56,097	649,781	765,151
Oct.	1,346,367	227,767	174,433	14,346	7,656	31,332	1,061,498	1,047,327	57,102	619,445	726,922
Nov.	1,347,202	212,286	159,737	14,193	7,535	30,820	1,078,270	1,060,263	56,647	625,921	721,282
Dec.	1,429,236	219,127	166,904	14,014	8,143	30,066	1,152,757	1,136,002	57,353	781,339	647,898
2021 Jan.	1,348,921	219,860	166,494	14,115	8,061	31,190	1,072,140	1,054,994	56,921	638,042	710,879
Feb.	1,328,303	210,619	157,313	14,119	8,047	31,140	1,060,378	1,043,746	57,306	616,473	711,830
Mar.	1,364,046	209,400	155,323	14,367	7,966	31,744	1,098,486	1,081,989	56,160	647,647	716,400
Apr.	1,307,161	210,799	158,143	14,085	7,836	30,735	1,041,472	1,024,734	54,890	604,863	702,299
May	1,370,231	221,201	168,678	14,037	7,809	30,677	1,093,721	1,076,918	55,309	621,827	748,404
June	1,384,834	213,600	159,995	14,326	8,094	31,184	1,115,447	1,101,897	55,787	670,632	714,202
July	1,319,694	219,775	165,984	14,345	8,104	31,343	1,042,015	1,024,970	57,903	657,905	661,789
Aug.	1,360,722	250,742	165,757	45,091	8,174	31,720	1,053,653	1,037,259	56,327	699,773	660,949
Sep.	1,431,909	246,908	160,943	45,606	8,267	32,092	1,130,558	1,115,126	54,443	746,128	685,781
Oct.	1,388,160	250,340	164,602	45,719	8,449	31,570	1,083,141	1,066,604	54,678	735,595	652,564
Nov.	1,456,861	258,815	170,460	46,375	8,405	33,575	1,142,719	1,127,545	55,327	773,217	683,644
Dec.	1,592,822	261,387	173,821	46,491	8,426	32,649	1,276,150	1,260,673	55,285	1,009,488	583,334

***** Assets and liabilities vis-à-vis all countries within and outside the euro area. Up to December 2000 the levels at the end of each quarter are shown, owing to revaluations, at market prices; within each quarter, however, the levels are computed on the basis of cumulative transaction values. From January 2001 all end-of-month levels are valued at market prices. **1** Mainly net claims on TARGET2 balances (acc. to the respective country designation), since November 2000 also balances with non-euro area central banks within the ESCB. **2** Mainly long-term debt securities from issuers within the euro area. **3** Including estimates of currency in circulation abroad. **4** See Deutsche Bundesbank, Monthly Report, October 2014, p. 22. **5** Difference between External assets and External liabilities. **6** Euro opening balance sheet of the Bundesbank as at 1 January 1999.

XII. External sector

8. External positions of enterprises *

€ million

End of reporting period	Claims on non-residents							Liabilities to non-residents						
			Claims on foreign non-banks							Liabilities to non-banks				
					from trade credits							from trade credits		
	Total	Balances with foreign banks	Total	from financial operations	Total	Credit terms granted	Advance payments effected	Total	Loans from foreign banks	Total	from financial operations	Total	Credit terms used	Advance payments received
Rest of the world														
2017	901,267	218,110	683,156	457,369	225,788	211,769	14,018	1,115,680	143,928	971,752	770,140	201,612	131,034	70,579
2018	934,837	234,595	700,241	468,418	231,823	217,561	14,262	1,225,989	146,105	1,079,884	873,977	205,907	134,897	71,010
2019	959,708	226,949	732,759	499,322	233,437	217,768	15,669	1,281,332	165,199	1,116,133	908,374	207,759	133,704	74,055
2020	1,007,574	250,320	757,254	529,154	228,099	211,800	16,300	1,360,348	167,766	1,192,582	984,663	207,919	129,171	78,748
2021 June	1,064,620	249,361	815,259	569,374	245,885	228,928	16,957	1,405,317	164,780	1,240,537	1,016,612	223,925	140,022	83,903
July	1,066,535	253,859	812,676	569,944	242,732	225,820	16,912	1,412,766	176,627	1,236,138	1,016,188	219,950	135,566	84,384
Aug.	1,077,379	260,534	816,844	579,112	237,732	220,894	16,839	1,412,471	175,411	1,237,061	1,022,017	215,044	129,822	85,222
Sep.	1,097,096	252,493	844,603	596,143	248,459	231,425	17,035	1,453,494	180,196	1,273,297	1,041,650	231,647	146,328	85,319
Oct.	1,125,092	271,255	853,837	591,532	262,304	245,203	17,102	1,501,407	209,230	1,292,177	1,054,098	238,079	149,153	88,926
Nov.	1,171,116	277,646	893,469	617,162	276,308	258,949	17,359	1,544,722	221,556	1,323,166	1,072,250	250,916	162,163	88,753
EU Member States (27 excl. GB)														
2017	522,279	166,645	355,634	263,631	92,003	83,509	8,494	720,770	93,932	626,838	544,462	82,376	62,137	20,239
2018	545,146	176,529	368,617	276,091	92,525	84,214	8,312	796,793	87,930	708,863	626,713	82,150	61,561	20,589
2019	569,888	176,258	393,630	302,654	90,976	82,454	8,522	824,390	89,604	734,787	650,172	84,615	62,534	22,081
2020	599,741	188,300	411,440	322,386	89,054	80,200	8,854	866,365	92,592	773,773	687,613	86,160	62,357	23,803
2021 June	634,306	195,636	438,670	342,302	96,368	87,237	9,130	895,230	93,766	801,465	708,232	93,233	67,553	25,680
July	634,744	198,458	436,285	341,574	94,712	85,629	9,083	895,013	92,773	802,240	711,618	90,622	65,103	25,519
Aug.	645,244	207,098	438,146	346,930	91,215	82,131	9,084	894,407	93,977	800,430	713,628	86,802	61,163	25,639
Sep.	651,741	199,547	452,194	354,045	98,149	88,928	9,221	924,662	110,957	813,705	720,832	92,873	67,426	25,446
Oct.	666,662	213,054	453,609	350,110	103,499	94,344	9,155	946,765	127,235	819,530	721,091	98,439	71,779	26,660
Nov.	681,167	217,960	463,206	353,168	110,039	100,793	9,245	967,002	140,052	826,951	719,434	107,517	81,035	26,482
Extra-EU Member States (27 incl. GB)														
2017	378,987	51,465	327,522	193,738	133,784	128,260	5,524	394,910	49,996	344,914	225,677	119,236	68,897	50,340
2018	389,691	58,066	331,625	192,327	139,298	133,347	5,950	429,197	58,175	371,021	247,265	123,757	73,335	50,422
2019	389,820	50,692	339,129	196,668	142,461	135,314	7,146	456,942	75,595	381,347	258,203	123,144	71,171	51,974
2020	407,833	62,020	345,814	206,768	139,046	131,600	7,445	493,983	75,175	418,809	297,050	121,758	66,813	54,945
2021 June	430,314	53,725	376,590	227,072	149,517	141,691	7,826	510,087	71,014	439,073	308,380	130,692	72,470	58,222
July	431,792	55,401	376,391	228,370	148,020	140,191	7,829	517,753	83,854	433,899	304,570	129,328	70,464	58,864
Aug.	432,135	53,436	378,699	232,181	146,517	138,763	7,754	518,064	81,434	436,630	308,388	128,242	68,659	59,583
Sep.	445,355	52,946	392,409	242,098	150,310	142,497	7,814	528,832	69,240	459,592	320,818	138,775	78,901	59,873
Oct.	458,429	58,202	400,228	241,423	158,805	150,859	7,946	554,642	81,995	472,647	333,007	139,640	77,374	62,265
Nov.	489,949	59,686	430,263	263,994	166,269	158,156	8,113	577,720	81,505	496,215	352,816	143,399	81,128	62,271
Euro area (19)														
2017	454,033	149,685	304,348	232,178	72,170	64,683	7,487	654,278	75,669	578,609	512,786	65,823	50,442	15,381
2018	468,699	156,351	312,348	240,676	71,672	64,427	7,245	730,553	68,747	661,806	596,496	65,310	49,555	15,755
2019	492,090	157,829	334,261	263,830	70,431	62,939	7,492	751,076	69,464	681,612	615,369	66,243	49,609	16,634
2020	515,425	167,497	347,928	279,213	68,715	61,150	7,565	783,041	71,423	711,617	645,409	66,208	48,316	17,891
2021 June	536,631	171,581	365,050	291,933	73,117	65,369	7,749	814,593	74,426	740,167	668,245	71,922	52,035	19,887
July	541,433	180,967	360,466	287,849	72,617	64,790	7,827	814,810	73,730	741,080	670,829	70,251	50,514	19,737
Aug.	548,489	187,471	361,018	291,497	69,521	61,737	7,783	816,982	75,912	741,070	674,183	66,887	47,226	19,661
Sep.	551,461	179,869	371,592	296,105	75,487	67,519	7,968	844,370	91,097	753,273	681,087	72,186	52,538	19,648
Oct.	566,212	192,182	374,031	294,113	79,918	71,985	7,933	866,674	107,300	759,374	682,156	77,219	56,744	20,475
Nov.	579,122	198,332	380,790	294,478	86,311	78,304	8,007	883,118	118,543	764,575	680,291	84,284	63,906	20,378
Extra-Euro area (19)														
2017	447,234	68,425	378,809	225,191	153,618	147,087	6,531	461,402	68,259	393,143	257,354	135,789	80,592	55,197
2018	466,138	78,244	387,894	227,743	160,151	153,134	7,017	495,436	77,358	418,078	277,482	140,597	85,342	55,255
2019	467,618	69,120	398,498	235,492	163,006	154,829	8,176	530,256	95,735	434,521	293,005	141,516	84,095	57,421
2020	492,149	82,823	409,326	249,941	159,385	150,650	8,735	577,307	96,343	480,965	339,254	141,711	80,854	60,856
2021 June	527,989	77,780	450,209	277,442	172,768	163,560	9,208	590,724	90,354	500,370	348,367	152,003	87,987	64,016
July	525,102	72,892	452,210	282,095	170,115	161,030	9,086	597,955	102,897	495,058	345,359	149,699	85,052	64,647
Aug.	528,890	73,063	455,826	287,615	168,212	159,156	9,055	595,489	99,499	495,991	347,833	148,157	82,596	65,561
Sep.	545,634	72,624	473,011	300,038	172,972	163,906	9,066	609,124	89,099	520,024	360,563	159,461	93,790	65,672
Oct.	558,880	79,074	479,806	297,419	182,387	173,218	9,169	634,733	101,930	532,803	371,942	160,860	92,409	68,451
Nov.	591,994	79,314	512,680	322,683	189,996	180,645	9,352	661,604	103,014	558,590	391,958	166,632	98,257	68,375

* The assets and liabilities vis-à-vis non-residents of banks (MFIs) in Germany are shown in Table 4 of Section IV., "Banks". Statistical increases and decreases have not been eliminated; to this extent, the changes in totals are not comparable with the figures shown in Table XII.7.

XII. External sector

9. ECB`s euro foreign exchange reference rates of selected currencies *

EUR 1 = currency units ...

Yearly or monthly average	Australia AUD	Canada CAD	China CNY	Denmark DKK	Japan JPY	Norway NOK	Sweden SEK	Switzerland CHF	United Kingdom GBP	United States USD
2010	1.4423	1.3651	8.9712	7.4473	116.24	8.0043	9.5373	1.3803	0.85784	1.3257
2011	1.3484	1.3761	8.9960	7.4506	110.96	7.7934	9.0298	1.2326	0.86788	1.3920
2012	1.2407	1.2842	8.1052	7.4437	102.49	7.4751	8.7041	1.2053	0.81087	1.2848
2013	1.3777	1.3684	8.1646	7.4579	129.66	7.8067	8.6515	1.2311	0.84926	1.3281
2014	1.4719	1.4661	8.1857	7.4548	140.31	8.3544	9.0985	1.2146	0.80612	1.3285
2015	1.4777	1.4186	6.9733	7.4587	134.31	8.9496	9.3535	1.0679	0.72584	1.1095
2016	1.4883	1.4659	7.3522	7.4452	120.20	9.2906	9.4689	1.0902	0.81948	1.1069
2017	1.4732	1.4647	7.6290	7.4386	126.71	9.3270	9.6351	1.1117	0.87667	1.1297
2018	1.5797	1.5294	7.8081	7.4532	130.40	9.5975	10.2583	1.1550	0.88471	1.1810
2019	1.6109	1.4855	7.7355	7.4661	122.01	9.8511	10.5891	1.1124	0.87777	1.1195
2020	1.6549	1.5300	7.8747	7.4542	121.85	10.7228	10.4848	1.0705	0.88970	1.1422
2021	1.5749	1.4826	7.6282	7.4370	129.88	10.1633	10.1465	1.0811	0.85960	1.1827
2020 Aug.	1.6433	1.5654	8.1954	7.4460	125.40	10.5797	10.3087	1.0767	0.90081	1.1828
Sep.	1.6307	1.5586	8.0333	7.4418	124.50	10.7769	10.4279	1.0786	0.90947	1.1792
Oct.	1.6521	1.5559	7.9225	7.4424	123.89	10.9220	10.3967	1.0739	0.90741	1.1775
Nov.	1.6266	1.5472	7.8152	7.4459	123.61	10.7453	10.2311	1.0785	0.89605	1.1838
Dec.	1.6166	1.5595	7.9602	7.4412	126.28	10.6008	10.1736	1.0814	0.90624	1.2170
2021 Jan.	1.5764	1.5494	7.8730	7.4387	126.31	10.3661	10.0952	1.0794	0.89267	1.2171
Feb.	1.5605	1.5354	7.8136	7.4367	127.49	10.2791	10.0887	1.0858	0.87268	1.2098
Mar.	1.5444	1.4970	7.7465	7.4363	129.38	10.1469	10.1692	1.1065	0.85873	1.1899
Apr.	1.5544	1.4975	7.8051	7.4367	130.49	10.0376	10.1620	1.1031	0.86527	1.1979
May	1.5653	1.4732	7.8109	7.4362	132.57	10.0931	10.1471	1.0968	0.86258	1.2146
June	1.5761	1.4713	7.7391	7.4364	132.63	10.1444	10.1172	1.0940	0.85872	1.2047
July	1.5926	1.4806	7.6536	7.4373	130.35	10.3767	10.1979	1.0856	0.85613	1.1822
Aug.	1.6118	1.4827	7.6237	7.4369	129.28	10.4195	10.2157	1.0762	0.85287	1.1772
Sep.	1.6087	1.4910	7.6007	7.4361	129.66	10.1861	10.1710	1.0857	0.85683	1.1770
Oct.	1.5669	1.4436	7.4500	7.4398	131.21	9.8143	10.0557	1.0708	0.84694	1.1601
Nov.	1.5615	1.4339	7.2927	7.4373	130.12	9.9661	10.0459	1.0522	0.84786	1.1414
Dec.	1.5781	1.4463	7.1993	7.4362	128.80	10.1308	10.2726	1.0408	0.84875	1.1304

* Averages: Bundesbank calculations based on the daily euro foreign exchange reference rates published by the ECB; for additional euro foreign exchange reference rates, see Statistical Series Exchange rate statistics.

10. Euro area countries and irrevocable euro conversion rates in the third stage of Economic and Monetary Union

From	Country	Currency	ISO currency code	EUR 1 = currency units …
1999 January 1	Austria	Austrian schilling	ATS	13.7603
	Belgium	Belgian franc	BEF	40.3399
	Finland	Finnish markka	FIM	5.94573
	France	French franc	FRF	6.55957
	Germany	Deutsche Mark	DEM	1.95583
	Ireland	Irish pound	IEP	0.787564
	Italy	Italian lira	ITL	1,936.27
	Luxembourg	Luxembourg franc	LUF	40.3399
	Netherlands	Dutch guilder	NLG	2.20371
	Portugal	Portuguese escudo	PTE	200.482
	Spain	Spanish peseta	ESP	166.386
2001 January 1	Greece	Greek drachma	GRD	340.750
2007 January 1	Slovenia	Slovenian tolar	SIT	239.640
2008 January 1	Cyprus	Cyprus pound	CYP	0.585274
	Malta	Maltese lira	MTL	0.429300
2009 January 1	Slovakia	Slovak koruna	SKK	30.1260
2011 January 1	Estonia	Estonian kroon	EEK	15.6466
2014 January 1	Latvia	Latvian lats	LVL	0.702804
2015 January 1	Lithuania	Lithuanian litas	LTL	3.45280

XII. External sector

11. Effective exchange rates of the euro and indicators of the German economy's price competitiveness *

Q1 1999 = 100

Period	Effective exchange rates of the euro vis-à-vis the currencies of the group						Indicators of the German economy's price competitiveness						
	EER-19 [1]				EER-42 [2]		Based on the deflators of total sales [3] vis-à-vis				Based on consumer price indices vis-à-vis		
							26 selected industrial countries [4]						
								of which:					
	Nominal	In real terms based on consumer price indices	In real terms based on the deflators of gross domestic product [3]	In real terms based on unit labour costs of national economy [3]	Nominal	In real terms based on consumer price indices	Total	Euro area countries	Non-euro area countries	37 countries [5]	26 selected industrial countries [4]	37 countries [5]	60 countries [6]
2000	87.1	86.8	86.1	85.5	88.1	86.1	92.0	97.4	85.5	91.2	93.1	92.3	91.2
2001	87.6	87.1	86.8	84.5	90.2	86.9	91.7	96.5	86.0	90.5	93.0	91.7	91.1
2002	89.8	90.2	89.9	88.0	94.5	90.5	92.3	95.6	88.5	91.0	93.5	92.2	91.9
2003	100.4	101.3	101.0	99.0	106.4	101.5	95.8	94.7	97.6	95.3	97.0	96.7	96.9
2004	104.2	105.2	104.0	102.2	110.9	105.3	96.2	93.5	100.0	95.6	98.5	98.2	98.5
2005	102.8	103.8	102.0	100.6	109.0	102.9	94.7	92.0	98.8	93.3	98.4	97.1	96.8
2006	102.8	103.8	101.5	99.4	109.1	102.2	93.5	90.3	98.2	91.6	98.6	96.7	96.1
2007	106.3	106.8	103.6	101.1	112.7	104.4	94.5	89.6	102.0	91.9	100.9	98.3	97.4
2008	110.1	109.7	105.8	104.9	117.4	106.9	94.8	88.3	105.2	91.2	102.4	98.4	97.6
2009	111.6	110.5	107.0	108.6	120.5	107.9	95.2	89.1	104.7	92.0	101.9	98.6	98.0
2010	104.4	102.8	98.8	101.0	111.9	99.0	92.5	88.7	98.2	88.1	98.8	94.3	92.6
2011	104.2	101.9	97.0	99.3	112.7	98.5	92.1	88.4	97.6	87.3	98.2	93.5	92.0
2012	98.5	96.7	91.4	93.7	107.5	93.7	90.1	88.3	92.5	84.7	95.9	90.5	89.0
2013	102.0	99.7	94.5	96.6	112.2	96.7	92.3	88.7	97.5	86.6	98.1	92.3	91.0
2014	102.3	99.1	94.4	96.7	114.5	97.1	92.9	89.6	97.7	87.3	98.2	92.5	91.6
2015	92.5	89.4	85.8	86.1	106.1	88.6	89.8	90.2	88.9	83.6	94.4	87.8	87.0
2016	95.2	91.4	88.1	p 87.3	110.1	90.6	90.6	90.7	90.4	84.9	95.0	88.8	88.2
2017	97.4	93.3	89.2	p 87.9	112.4	91.8	91.9	90.8	93.3	85.7	96.3	89.9	89.0
2018	99.9	95.5	90.7	p 89.4	117.3	94.9	93.1	90.9	96.4	86.7	97.7	91.2	90.9
2019	98.1	93.1	88.9	p 87.0	115.4	92.3	92.1	91.1	93.5	85.8	96.4	89.9	89.5
2020	99.6	93.5	p 89.4	p 87.5	119.4	93.8	92.1	91.2	93.3	86.2	96.4	90.1	90.3
2021	99.6	p 93.4	...	...	120.8	p 94.2	...	...	...	...	p 97.4	p 90.7	p 91.1
2019 Jan.	98.7	94.1			116.3	93.6					96.8	90.4	90.1
Feb.	98.3	93.6	89.1	p 87.3	115.6	92.9	92.1	90.7	94.0	85.6	96.5	90.0	89.5
Mar.	97.7	93.0			115.2	92.5					96.2	89.6	89.2
Apr.	97.6	92.8			115.0	92.2					96.5	89.8	89.4
May	98.1	93.2	88.8	p 87.1	115.7	92.7	92.1	91.0	93.8	85.6	96.7	90.2	89.8
June	98.7	93.7			116.2	93.0					96.8	90.3	89.9
July	98.3	93.3			115.3	92.2					96.7	90.1	89.5
Aug.	98.8	93.7	89.2	p 87.2	116.2	92.8	92.2	91.3	93.5	86.0	96.5	90.3	89.8
Sep.	98.1	92.9			115.3	92.0					96.2	89.9	89.4
Oct.	98.0	92.6			115.2	91.7					96.2	89.8	89.2
Nov.	97.4	91.9	88.6	p 86.2	114.6	91.1	92.0	91.3	92.8	85.8	95.9	89.4	88.9
Dec.	97.3	91.9			114.6	91.0					96.0	89.5	88.9
2020 Jan.	96.9	91.2			114.1	90.4					95.9	89.0	88.4
Feb.	96.2	90.5	88.0	p 86.7	113.5	89.7	91.6	91.3	91.9	85.4	95.5	88.7	88.1
Mar.	98.8	92.9			117.8	93.0					96.4	90.0	90.1
Apr.	98.1	92.5			117.5	93.0					96.2	90.1	90.3
May	98.3	92.6	89.0	p 87.3	117.5	92.9	91.2	91.1	91.2	85.8	96.3	90.2	90.3
June	99.7	93.8			119.1	93.9					97.0	90.8	90.9
July	100.4	94.4			120.3	94.8					96.0	90.0	90.3
Aug.	101.5	94.9	90.1	p 88.2	122.4	95.8	92.7	91.3	94.6	86.9	97.0	90.8	91.4
Sep.	101.5	94.8			122.4	95.7					96.9	90.7	91.2
Oct.	101.3	94.6			122.4	95.6					96.6	90.5	91.1
Nov.	100.6	94.1	p 90.4	p 87.8	121.6	95.0	92.9	91.1	95.3	86.7	96.5	90.1	90.6
Dec.	101.8	95.1			122.9	95.9					97.0	90.6	91.0
2021 Jan.	101.3	95.3			122.4	96.0					97.9	91.3	91.8
Feb.	100.6	94.5	p 90.0	p 87.6	121.5	95.2	93.0	91.3	95.3	86.7	97.9	91.2	91.5
Mar.	100.3	94.1			121.2	94.8					97.7	91.1	91.4
Apr.	100.6	94.2			121.9	95.1					98.0	91.3	91.8
May	100.8	94.3	p 88.9	p 85.5	122.3	95.2	92.9	91.1	95.4	86.4	98.1	91.4	91.9
June	100.2	93.7			121.5	94.5					97.9	91.1	91.5
July	99.7	93.5			120.8	94.2					97.7	91.0	91.4
Aug.	99.3	93.2	p 88.0	p 84.6	120.4	93.9	94.0	92.5	96.1	87.2	97.4	90.7	91.1
Sep.	99.4	93.2			120.4	p 93.7					97.4	90.7	p 90.9
Oct.	98.4	p 92.3			119.5	p 93.0					96.7	p 90.0	p 90.3
Nov.	97.6	p 91.6	...	...	118.8	p 92.5	...	...	...	...	p 96.2	p 89.5	p 90.0
Dec.	97.1	p 91.2			119.0	p 92.7					p 96.0	p 89.2	p 90.0

* The effective exchange rate corresponds to the weighted external value of the currency concerned. The method of calculating the indicators of the German economy's price competitiveness is consistent with the procedure to compute the effective exchange rates of the euro. A decline in the figures implies an increase in competitiveness. The weights are based on trade in manufactured goods and services. For more detailed information on methodology and weighting scale, see the website of the Deutsche Bundesbank (https://www.bundesbank.de/content/796162). **1** The calculations are based on the weighted averages of the changes in the bilateral exchange rates of the euro vis-à-vis the currencies of the following countries: Australia, Bulgaria, Canada, China, Croatia, Czechia, Denmark, Hong Kong, Hungary, Japan, Norway, Poland, Romania, Singapore, South Korea, Sweden, Switzerland, the United Kingdom and the United States. Where current price and wage indices were not available, estimates were used. **2** ECB calculations. Includes countries belonging to the group EER-19 and additionally Algeria, Argentina, Brazil, Chile, Colombia, Iceland, India, Indonesia, Israel, Malaysia, Mexico, Morocco, New Zealand, Peru, Philippines, the Russian Federation, Saudi Arabia, South Africa, Taiwan, Thailand, Turkey, Ukraine and United Arab Emirates. **3** Annual and quarterly averages. **4** Euro area countries (from 2001 including Greece, from 2007 including Slovenia, from 2008 including Cyprus and Malta, from 2009 including Slovakia, from 2011 including Estonia, from 2014 including Latvia, from 2015 including Lithuania) as well as Canada, Denmark, Japan, Norway, Sweden, Switzerland, the United Kingdom and the United States. **5** Euro area countries (current composition) and countries belonging to the group EER-19. **6** Euro area countries (current composition) and countries belonging to the group EER-42.

Overview of publications by the Deutsche Bundesbank

This overview provides information about selected recent economic and statistical publications by the Deutsche Bundesbank. Unless otherwise indicated, these publications are available in both English and German, in printed form and on the Bundesbank's website.

The printed publications are available free of charge to interested parties and may be obtained through the Bundesbank's order portal. Up-to-date figures for selected statistical datasets are available on the Bundesbank's website. In addition, the new Statistical Series provide a new basic structure and advanced options for using data and are also available on the Bundesbank's website.

Annual Report

Financial Stability Review

Monthly Report

A list of the articles published in the period from 2010 to 2021 is available on the Bundesbank's website.

Monthly Report articles

March 2021
- German balance of payments in 2020
- A new European prudential framework for investment firms

April 2021
- The impact of monetary policy depending on the debt situation in the non-financial private sector: Evidence for the euro area
- Assessments and expectations of firms in the pandemic: findings from the Bundesbank Online Panel Firms
- Digital money: options for payments

May 2021
- The current economic situation in Germany

June 2021
- Outlook for the German economy for 2021 to 2023
- Government finances: Central bank bond purchases increase sensitivity to interest rate changes
- Federal debt: allocate premia on accruals basis in budgetary interest expenditure
- Local government finances: how cash advances can be limited and budget imbalances avoided

July 2021
- Cross-border corporate takeovers: the impact of internationalisation on enterprises in Germany
- Crypto tokens and decentralised financial applications
- Digital risks in the banking sector
- Macroprudential policy and growth-at-risk

August 2021
- The current economic situation in Germany

September 2021
- The Eurosystem's monetary policy strategy

– The impact of the Eurosystem's monetary policy on Bitcoin and other crypto tokens
– The performance of German credit institutions in 2020

October 2021
– State government finances in 2020: deficit due to temporary effects of pandemic, escape clauses also used to build reserves
– The global economy during the coronavirus pandemic
– What do households in Germany think about the digital euro? First results from surveys and interviews
– The regulation of remuneration at credit institutions

November 2021
– The current economic situation in Germany

December 2021
– Outlook for the German economy for 2022 to 2024
– German enterprises' profitability and financing in 2020

January 2022
– Changes in the secured money market
– Climate change and climate policy: analytical requirements and options from a central bank perspective
– Scenario-based equity valuation effects induced by greenhouse gas emissions

Statistical Series*

Banks
– Banking statistics, monthly
– Statistics on payments and securities trading, September

Corporate financial statements
– Consolidated financial statement statistics, June/December
– Financial statement statistics (extrapolated results), December
– Financial statement statistics (ratios), May
– Financial statement statistics (ratios – provisional data), May

Economic activity and prices
– Seasonally adjusted business statistics, monthly

Exchange rates
– Exchange rate statistics, monthly

External sector
– Balance of payments statistics, monthly
– Direct investment statistics, April
– International investment position and external debt, monthly

Macroeconomic accounting systems
– Financial accounts, June

Money and capital markets
– Capital market indicators, monthly
– Investment funds statistics, monthly
– Securities issues statistics, monthly

Special Statistical Publications

1 Banking statistics guidelines, January 2021[2]

2 Banking statistics, customer classification, July 2021[2]

For footnotes, see p. 88•.

3 Aufbau der bankstatistischen Tabellen, July 2013[1,2]

7 Notes on the coding list for the balance of payments statistics, September 2013

Special Publications

Makro-ökonometrisches Mehr-Länder-Modell, November 1996[1]

Europäische Organisationen und Gremien im Bereich von Währung und Wirtschaft, May 1997[1]

Die Zahlungsbilanz der ehemaligen DDR 1975 bis 1989, August 1999[1]

The market for German Federal securities, May 2000

Macro-Econometric Multi-Country Model: MEMMOD, June 2000

Bundesbank Act, September 2002

Die Europäische Union: Grundlagen und Politikbereiche außerhalb der Wirtschafts- und Währungsunion, April 2005[1]

Die Deutsche Bundesbank – Aufgabenfelder, rechtlicher Rahmen, Geschichte, April 2006[1]

European economic and monetary union, April 2008

Weltweite Organisationen und Gremien im Bereich von Währung und Wirtschaft, March 2013[1]

Discussion Papers°

38/2021
Structural change revisited: The rise of manufacturing jobs in the service sector

39/2021
Safe asset shortage and collateral reuse

40/2021
Hitting the elusive inflation target

41/2021
Monetary policy and Bitcoin

42/2021
Bank risk-taking and impaired monetary policy transmission

43/2021
Gauging the effects of the German COVID-19 fiscal stimulus package

44/2021
Household bargaining, pension contributions and retirement expectations: evidence from the German Panel on Household Finances

45/2021
Identifying empty creditors with a shock and micro-data

46/2021
Why are interest rates on bank deposits so low?

47/2021
Consumption taxation to finance pension payments

48/2021
Do inflation expectations improve model-based inflation forecasts?

49/2021
US trade policy and the US dollar

50/2021
Using energy and emissions taxation to finance labor tax reductions in a multi-sector economy: An assessment with EMuSe

For footnotes, see p. 88•.

51/2021
Optimal monetary policy using reinforcement learning

52/2021
Exchange rate depreciations and local business cycles: The role of bank loan supply

53/2021
Economic analysis using higher frequency time series: Challenges for seasonal adjustment

54/2021
Markups and financial shocks

55/2021
The hockey stick Phillips curve and the effective lower bound

56/2021
Economic theories and macroeconomic reality

Banking legislation

1 Bundesbank Act, July 2013, and Statute of the European System of Central Banks and of the European Central Bank, June 1998

2 Gesetz über das Kreditwesen, January 2008[1]

2a Solvency Regulation and Liquidity Regulation, February 2008[2]

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* The Statistical Series replace the Statistical Supplements and, in part, the Special Statistical Publications; they will be provided exclusively on the Bundesbank's website under Publications/Statistics.
o Discussion papers published from 2000 are available online.
1 Publication available in German only.
2 Available only as a download.